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The Journal of MEDICAL EDUCATION is published bimonthly: January, March, May, July, September, November, from 185 N. Wabash Ave., Chicago 1. Phone: STate 2-8870. *Subscription Rate*. Domestic, $5.00 per year, Foreign $6.00. Advertising representative: Vinning & Myers, 55 E. Wacker Drive, Chicago 1, Ill. *Copy Deadline* 10th of month preceding issue. Forms *close* 15th of month preceding issue. Entered as second class matter, January 17, 1950, at the Post Office, Chicago, Illinois, under the Act of March 3, 1879.

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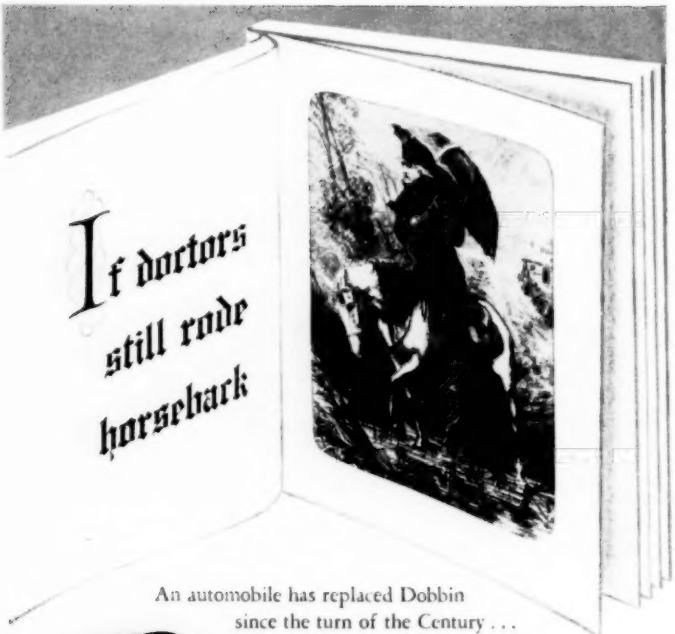

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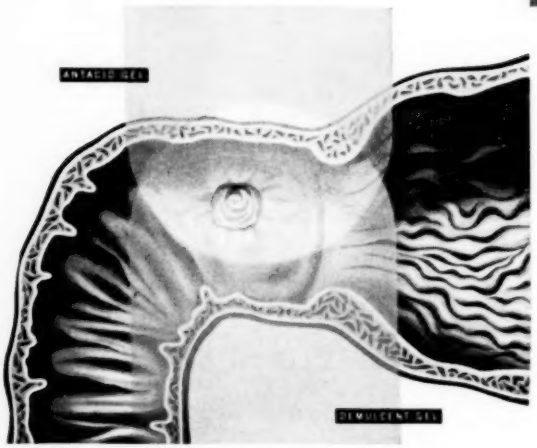

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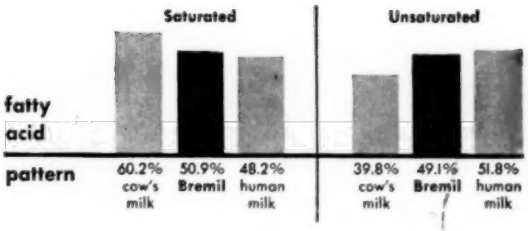

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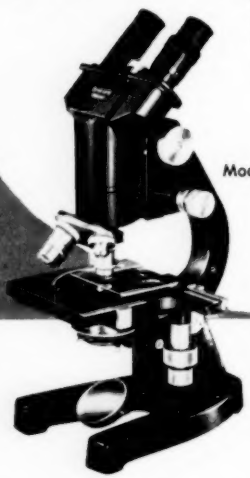

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DR. FRED C. ZAPFFE
1873-1951

The Journal of
Medical Education

Volume 26 No. 3 MAY, 1951

Resolution in Recognition of the Service of Frederick C. Zapffe

With a deep sense of personal loss, the Executive Council of the Association of American Medical Colleges has learned of the death of Doctor Frederick C. Zapffe on March 10, 1951. Coming to the Association first in 1894 as an assistant and then in 1903 as its Secretary, Dr. Zapffe gave himself unstintingly to the task, and almost single-handedly, often at great personal sacrifice, carried on the work until the time of his retirement as Secretary in November 1948.

In the half century in which he served the Association, Dr. Zapffe took an active part in the inspection and classification which resulted in the elimination of substandard medical colleges (1903-1929), in the development of a graded curriculum (1905-1910), in the establishment of two years of college preparation as a requirement for admission to medical college (1916), in the collection and interpretation of data on applications and applicants for the study of medicine and on the accomplishment records of students in medicine (1926-1949).

In July 1926 he established the Association's Journal and edited it without interruption through the past twenty-five years. At the time of his death he was engaged in writing the history of the Association.

An article of tribute setting forth Dr. Zapffe's many services to the Association was published in the January 1949 issue of the Journal. A formal resolution of appreciation was presented Dr. Zapffe in November 1948 and appeared in the March 1949 issue of the Journal.

We extend to the members of his family this expression of sympathy in the great loss that they, and all those in the general field of medical education, have suffered in his death.

JOSEPH C. HINSEY
Chairman—Executive Council

A Brief Account of Dr. Zapffe's Life

Dr. Frederick Carl Zapffe was born in Milwaukee, Wisconsin March 16, 1873, the son of August Zapffe and Babette (Weiss) Zapffe. He received his early education at the Milwaukee High School and from private tutors, and graduated from the University of Illinois College of Medicine in 1896. He married Anna Mae Stolba October 21, 1896. Mrs. Anna Stolba Zapffe died February 15, 1940, and on May 11, 1949, Dr. Zapffe married Eleanor Hatch Coglan.

Dr. Zapffe's teaching experience included the following: at the University of Illinois College of Medicine he was successively instructor in pathology and bacteriology 1896-1898, professor of histology and embryology 1898-1907 instructor in surgery 1907-1911; at the Chicago College of Medicine and Surgery he was professor of operative surgery 1911-13, professor of clinical surgery 1913-16. His clinical experience included: attending surgeon of the Chicago Hospital and associate of Dr. Alexander H. Ferguson 1907-1912; associate of John B. Murphy 1912-1916. His editorial experience included: authorship of a textbook on bacteriology 1903; editor of Medical Standard 1899-1904; director of Current Medical Literature department of the Journal of the American Medical Association 1904-1931; editor of the Journal of the Association of American Medical Colleges 1926-1951; author of numerous articles on medical education. His administrative experience included: Manager of Chicago Hospital Service; Executive Secretary of the Association of American Medical Colleges 1903-1949.

The art of medicine must be conserved. It has been neglected for a long time. The need for a broader education of the physician to the end that he will serve the patient as a human being and not as a case of any particular disease cannot be stressed too much. It should be the first thought of the general as well as of the medical educator. If we will do that, the results will be much better than they have been for a long time. It is not credits or hours that count; it is knowledge and the ability to make good use of that knowledge. That is real education. —Fred C. Zapffe, Journal of the Association of American Medical Colleges, July 1940, p. 234.

SYMPOSIUM OF PANEL DISCUSSIONS

Sixty-first Annual Meeting
of the
Association of American Medical Colleges
Held at Lake Placid, New York
October 23, 24, and 25, 1950

Faculty Recruitment Problems

Round-table Members: Vernon W. Lippard, *Chairman,* W. C. Davison, John Russell and Francis S. Smyth.

There seemed to be general agreement that shortage of faculty, in terms of both quality and quantity, is one of the serious problems which medical schools face today and that, with expansion of enrollment, development of new schools and loss of faculty members to the military services, the problem is likely to be magnified within the next few years. If there was doubt in anyone's mind as to this situation, it must have been dispelled by Dr. Hinsey's address. The purpose of this round-table was to suggest some of the ways in which this problem may be solved.

As a framework for the discussion, the following four questions were raised:

1. Is there a serious shortage of teachers in medical schools?
2. Are we recruiting for our faculties the most highly qualified men?
3. Are fellowship programs productive?
4. Are our methods of selection and appointment satisfactory?

As these questions were not answered directly, our report will not follow this outline. Instead, we shall summarize some of the suggestions which discussion of these topics stimulated. In the course of the discussion, it became apparent that recruitment of faculties for the medical sciences and clinical departments present somewhat different problems, so they will be considered separately.

Medical Sciences except Pathology

It was the consensus that we cannot expect to fill many of the positions in the medical sciences with physicians. If this is true, how can we influence more and better men to enter graduate study in these fields? We are at a disadvantage in competing with physics, chemistry, biology, geology, etc. because the college student comes in contact with those disciplines before he has ever heard of biochemistry or pharmacology. Therefore, it may become necessary to do some subtle recruiting by having medical scientists talk at

meetings of science clubs at the college level and otherwise better inform college students of the opportunities presented.

There was considerable criticism of the fellowship programs and their emphasis on assistance at the postdoctoral level. It seems imperative that if a larger number of capable young men and women are to be attracted to graduate study in the medical sciences, fellowships and assistantships sufficient to defray the major portion of their expenses must be made available to candidates for the Ph.D. degree.

The value of long term postdoctoral fellowships in preparing men for the medical sciences was questioned. Although such fellowships will provide some exceptionally well trained men for the clinical departments, those selected are usually well advanced in their clinical training and it seems unlikely that many will be willing to divorce themselves from the clinic to the extent necessary for adequate training in the medical sciences.

In order to better acquaint candidates for the Ph.D. degree with some of the problems of clinical medicine, it was suggested that they be exposed to clinical medicine, at least to the extent of attending lectures or clinics in internal medicine and perhaps to the extent of taking a clerkship.

Clinical Medicine, Pathology and Preventive Medicine

In these fields, we must recruit men with the M. D. degree. It was generally agreed that those who develop an interest in one of the medical sciences or research in any field while a student are much more likely to have a continued interest in academic medicine. Two methods of encouraging this interest were suggested: (1) making available more fellowships for students who interrupt their regular programs and spend a year or summer vacations in the laboratory and (2) requiring a thesis, based on original research, for the M. D. degree.

Problems Common to the Medical Sciences and Clinical Medicine

It was suggested that teaching as a major endeavor, rather than as an adjunct to research, should be made more attractive. Toward this end, there should be an organized effort to help young men to teach more effectively and thereby to increase their satisfaction in doing it well.

There was some concern about the development of research institutes where instruction is not required. Research institutes, no matter how efficient, may become isolated and both professional education and research stand to lose if the division becomes too pronounced.

The fellowship programs were criticized again. It was pointed out that many fellowships prohibit or at least discourage experience in teaching. Fellowships in the field of cancer alone amount to over a million dollars per year and all are designed to produce research workers in one field.

Compensation and facilities were mentioned as important considerations in faculty recruitment. These factors are so obvious, however, that little time was spent in discussing them.

Faculty Appointment Methods

One of the most important factors in discouraging young men to enter academic medicine may be our method of faculty appointment. It may not have worked too badly forty years ago. At that time, clinical faculties were composed almost entirely of local physicians whose abilities were well known in their own communities. Preclinical faculties were small and the men in each field were known to each other. During the early years of the full-time system in clinical departments, there were comparatively few sources of well trained men. As the sources became more numerous and scattered, we were forced to adopt less efficient methods. If a qualified candidate is not available locally, we write numerous and time consuming letters and waste the valuable time of faculty members on scouting expeditions. Finding the right man for the job is often a matter of persistence and mere chance. The whole procedure is carried out in whispers and a candidate who lets it be known that he might be enticed to move runs a serious chance of being eliminated from consideration. It was generally agreed that we have outgrown these methods and that they are no longer effective.

It was suggested that a simple and practical program might be worked out along the following lines:

1. When a vacancy at any level in the faculty exists or is anticipated, the Editor of the Journal of MEDICAL EDUCATION would be notified.

2. A column would be established in the Journal and a list of vacancies and their locations would be announced in each issue.

3. Those interested would submit their curricula vitae directly to the schools.

4. Selection would be carried out in accordance with local customs.

There is nothing in this plan which would interfere with either the freedom of choice of faculty members or confidential negotiations between the schools and the candidates. It eliminates the quite valid objection that most people have to placing their names on published lists or applying for positions through placement bureaus which often distribute confidential information quite indiscriminately. It does not eliminate direct approach to a desirable candidate. The major advantage is that the young and comparatively unknown teacher may be considered for any position and it should aid in abolishing the ridiculous situation in which promising young men are leaving medical schools because they see no future locally, while the efficiency of other schools is diminished by shortage of qualified personnel.

RECOMMENDATION

The Panel recommends to the Association that the Editorial Board of the Journal of MEDICAL EDUCATION give consideration to the establishment of a column devoted to announcement of vacancies on faculties of member colleges and that the colleges to be encouraged to use the Journal as a medium for inviting inquiries in accordance with the plan suggested.

The Veterans Administration Program in Relation to Medical Education

Round-table Members: R. Hugh Wood, *Chairman,* Reginald Fitz, *Recorder,* Harold Diehl and John Youmans.

In addition to the panel leaders about thirty-five members of the Association were present at the discussion of the Veterans Administration program in relation to medical education. Also present was Dr. Edward H. Cushing, assistant medical director in charge of research and education, from the central office of the Veterans Administration.

GENERAL

Certain administrative problems and techniques, applicable to various situations in the Veterans Administration program, were discussed. The importance of establishing and maintaining a good working relationship with the manager of the hospital, the area office and the central office was emphasized. It was agreed that a remarkably successful and mutually advantageous relationship has been worked out between civilian institutions and the Federal agency. Indeed, in only a relatively small area has there been any difficulty; this is discussed in detail below.

The opinion was expressed that it is necessary for the deans committee to view the hospital as a whole so that its various services are developed proportionately and proper interrelationships maintained. To this end, it is recommended that the manager of the hospital and the deans committee secure the advice of the consultants in the various services or divisions before taking action regarding the purchase of equipment and changes in hospital practices or the educational program. This is the essence of good management. It prevents costly errors and encourages and preserves good working relationships and high morale of the staff.

It is further necessary that the hospital staff as well as the management realize that all must work within the law of the nation. When certain procedures are medically desirable but legally impossible, the law cannot be flouted. However, when any directive or regulation of the Veterans Administration can be proven disadvantageous in a particular instance, appeal to the Chief Medical Director of the central office will often effect the desired change. It has been found that the Chief Medical Director is eager to make such changes when possible.

STAFF OF THE HOSPITAL

There was general agreement that the staff of the VA hospital should be selected with the same care that a medical school exercises in choosing its faculty and the staff of its affiliated civilian hospitals. The manager, full-time staff, consultants and residents must be nominated by the associated school and appointed by the Veterans Administration. In all instances, the members of the staff of the VA hospital are expected to hold appropriate faculty appointment.

The residency training program is naturally the responsibility of the university and should be considered a part of its residency training program. This makes it less difficult to rotate VA residents and interns through the civilian hospitals for various subjects needed to complete their training. Such subjects as gynecology, obstetrics and pediatrics, as well as outpatient experience, are frequently lacking in VA hospitals. Since the Veterans Administration by law may not give outpatient care to nonservice connected cases, the VA hospitals do not have outpatient departments. The regional office provides this care to service connected cases only. In most instances, however, these clinics have not as yet developed in such a way as to make it profitable for interns and residents to rotate through them.

The VA regulations provide that the resident or intern may spend up to 50 percent of his time in another institution, if it is necessary to supplement his training.

LOCATION OF VA HOSPITALS

The location of new VA hospitals may be recommended by the Veterans Administration, but final authority for approval is vested in the President of the United States. However, the one difficulty has been political pressure. It has resulted in the establishment of VA hospitals in areas remote from medical centers, which means that they cannot be staffed adequately. Despite the fact that these hospitals cannot be administered properly, the local communities and their representatives in Congress have exerted pressure to keep them open. An example of this situation exists in the state of Georgia. A splendid hospital of 1,000 beds is located in Dublin, a very small town. It has been possible to recruit a staff sufficient to take care of only about 300 patients. Dr. Magnuson has publicly referred to the fact that 8 of 15 physicians in the Veterans Administration resigned rather than go there. A rather obvious solution to this problem in Georgia would be to have one hospital in Atlanta and the other in Augusta, in affiliation with the medical schools located in these cities. Because of the inability to close the Dublin hospital, the Veterans Administration finds itself with smaller and less well equipped establishments in affiliation with the two medical schools of the state.

It should be repeated that this is not in accordance with the policy of the Veterans Administration, but represents a condition which it has not been possible to change. Because of the ever present possibility of undesirable changes in the VA hospital program, usually brought about by political pressures, it seems to be unwise for a medical school to lean too heavily on the VA hospital for its clinical teaching beds. Sudden and unanticipated changes might seriously embarrass the medical school which depends too much on Veterans Administration support.

THE NONSERVICE CONNECTED PATIENT

The panel next considered the old and vexing problem of the nonservice connected patient who is able to pay for medical service. It must be remembered that the fault is with the law and not with VA policy. The

Veterans Administration must take the patient's signed statement as to his financial status and no investigation is permitted. Practicing physicians, individually, and through the American Medical Association and county and state medical societies, have opposed the entire philosophy of government care for nonservice connected cases. This argument has merit. However, the policy and the law have been in existence for about thirty years and it does not seem likely to be changed. Since these patients are to be hospitalized under this present policy and law, the aim of the Department of Medicine and Surgery is to give them good care. This is being done to an increasing extent throughout the nation. Significantly, 72 of the 140 VA hospitals now operate under a deans committee.

PROBLEMS

Two problems frequently present difficulties and there was general agreement by the panel and Association members present that a remedy for these should be sought.

The first is the quarterly allocation of funds by the Division of Research and Education for the payment of attending and consultant physicians. The amount of this allocation is subject to change each quarter and may vary as much as 20 to 25 percent of the total sum. This uncertainty makes it most difficult for the hospital management to plan a program of research and education. While the requirements of the law and the amount of available funds are necessary and important factors, it does seem that a moral commitment for the year could be made, as is done in the case of research grants by the United States Public Health Service. Since this matter concerns VA policy and may be decided by the budget committee of the Veterans Administration, without reference to the Bureau of the Budget, it seems that a solution could be found.

The second problem has occurred more than once when "across the board" reductions in personnel have been ordered, making it impossible to operate efficiently without closing wards or without impairing the quality of service rendered to the veteran patient. These situations have been met in one way or another, but only after much confusion, loss of time and damage to morale.

Many schools have long felt the need for a central committee or agency to deal with these two problems as well as the question of locating and closing VA hospitals. A motion that the Association of American Medical Colleges set up a committee for this purpose was passed unanimously. It was thought that this committee might include the chairmen of the deans committees of all member schools. An executive committee and appropriate officers of this larger group could keep all concerned informed regarding developments and needs. When political pressure appears to threaten the welfare of VA patients or points toward measures of false economy, the Association committee could appeal to lawmakers, individually and collectively.

The Responsibility of the Arts College to the Student Planning the Study of Medicine

Round-table Members: William E. Cadbury Jr., *Chairman,* Charles Dawson, Thomas Hunter and Richard Masland.

The chairman pointed out that it is not always easy to decide what the best interests of the student are, since his long range interests may conflict with his immediate interests, and the interests of the student himself may conflict, or at least appear to conflict, with the best interests of society. Hence, even if it is agreed that the arts college has responsibilities, it is not always clear what those responsibilities are.

In certain areas there seems to be little or no room for debate. For example, all would agree that the arts college has a responsibility to make available to the student certain courses which are absolutely needed; also, all would probably agree that the college has no responsibility to secure admission to medical school for all of its students who pass the required work. But there are many areas in which the responsibility is a matter for debate. For example, there are differences of opinion among college teachers as to whether a detailed and special advisory system should be available for those students who are considering medicine as a profession. Opinions extend from one extreme—that college teachers have no obligation to advise students beyond answering factual questions—to the other—that these young people should be given all the help possible.

Each of the members of the panel then spoke for about ten minutes on his views in a particular area. Dr. Dawson had been asked to take the academic programs of the colleges as his particular concern; Dr. Hunter took the question of admission to medical schools, and Dr. Masland took the development of desirable ethical, social and emotional attitudes in the students. The chairman had asked the panel members to present their views in a way which might be provocative enough to stimulate discussion; at least one of the panel members succeeded beyond our wildest hopes, since Dr. Masland's comments stimulated violent dissents (subsequently amicably resolved) from Dr. Hunter, Dr. Dawson, and the chairman, in turn.

Among Dr. Dawson's observations three in particular stood out as deserving repetition in this summary. First, that the student should be given the necessary tools to do a good job in medical school, and that the tools should be well sharpened. Second, that the college has a definite responsibility to prepare the weak or borderline student for the psychological shock of failure to be admitted to medical school. Third, that when a student fails to secure admission and returns for a fifth year of work in the hope of securing admission on a second try, the adviser should see to it that a good portion of his work in this extra year lies outside the field of the sciences.

Dr. Hunter pointed out that there seems to be general agreement that a "broad, liberal education" is the best preparation for medical school, so that

further laboring of this point would be redundant. In answer to one of the points made by the chairman, he stated that in his opinion the problems faced by students planning to study medicine are such that a carefully organized premedical advisory system is essential and should be considered a definite responsibility of the liberal arts college. He expressed the view that requirements, whether set by the medical school or by the college, should be limited, leaving as much flexibility as is reasonable for the student to follow his own bent. However, in order that following his bent may be profitable, the courses taken should be such as to require initiative, imagination, and a synthesis of ideas, rather than mere regurgitation. He also mentioned the necessity for better liaison between the medical schools and the colleges.

Dr. Masland's thesis was that graduates in medicine must be prepared to deal not only with physical aspects of disease, but with emotional problems as well. He presented data from a questionnaire which he gave to entering students in his school this year, showing that these entering men are not emotionally or psychologically prepared to accept or deal with that responsibility; in fact, they rather emphatically reject it. This raises the question whether the arts colleges are developing in their students the attitudes needed for a sound approach to the problems which they will face. Dr. Masland listed three factors which in his opinion are needed for the prospective physician to prepare himself to deal with the emotional aspects of medicine: first, he must himself be emotionally mature and secure; second, he must be sensitive to the problems of others, and third, he must have some formal training in techniques of emotional treatment. Dr. Masland then suggested that there are two alternatives for the arts college: it must either develop proper emotional attitudes, or it must disqualify those who do not have them. There was some debate as to whether the college has the right to disqualify at an early date, or the wisdom to select the ones to be disqualified, on this or any other ground.

The general discussion which followed fell into three somewhat overlapping categories: the need for liaison or mutual understanding between the arts colleges and the medical schools; the role which the arts college might play as a selecting agency, and the general area of interpersonal relations and personal responsibility.

The point was made that in a letter of recommendation any mention of a psychological difficulty might result in the disqualification of an applicant, and this was extended by the observation that it is very easy for a medical school to eliminate from consideration a student concerning whom a letter mentions any criticism at all. Dr. Hunter pointed out that one of the prevalent, and, in the long run, undesirable types who secure admission to medical school is the "dumb ox" who has no obvious psychological difficulties; who makes a host of friends and generally goes through life with flying colors, but who, because of his own lack of apparent troubles, does not recognize or sympathize with the difficulties of his patients.

Dr. Hunter pointed out that the medical school needs all the help it can

get in making its selections, and specifically asked Dr. Dawson if it would be possible for Columbia to give specific reasons along with its evaluations. Dr. Dawson pointed out that in any large school the number of students requiring recommendations is very great, and that specific details could well be supplied about those students in whom the medical school is interested, if the medical school would request them. There is a general feeling that the medical schools actually pay little attention to letters of recommendation, but that this is because often the letters are full of praise for everybody, hence are altogether unreliable. This discussion pointed up the need for better liaison between the colleges and the medical schools.

The question of major subject was also raised. The questioner specifically asked whether he would be safe in recommending to his students that they may major in any field which interests them, and asked for an official statement from the Association. The chairman pointed out that, short of such an official statement, it would be difficult to be more explicit than certain of the medical school people present at this meeting had been, and mentioned several admissions officers of medical schools who had made a statement to this effect within the last two days.

Dr. Alan Gregg illustrated the difficulty this way. He said that "academic people care passionately what they say, but not what they are understood to have said, whereas, for example, people in the advertising business do not care at all what they say, but do care passionately what they are understood to have said." Students and advisers in the arts colleges do not understand what the admissions officers say. Furthermore, students assume that if a little is good, a lot is better, and since the required courses and the recommended courses are generally in the sciences, the student assumes that more science is desirable, and pretty soon he has a major in science.

There was further discussion of the misunderstanding that arises from the list of courses "recommended" by the medical schools. It is difficult for a student, who wants above all else to be admitted to medical school, to ignore the "recommended" courses; he feels that since they are recommended, he had better take all of them, whereas in many cases what is meant is that some of these courses should be taken. Here, again, the problem is principally one of understanding.

There was discussion of some experiences in foreign medical education and preparation for it. The matter of extracurricular activities was mentioned as well as certain foreign practices in connection with the admission of candidates to medical schools. The "school-leaving scholarships," comparatively rare in this country, were described, by means of which the school which precedes medical school accepts responsibility for specifying which of its graduates are the most worthy and promising. It was pointed out that very often the undergraduate school is a better judge of the fitness of its students than is the medical school. The role of the undergraduate school in discouraging weak candidates and encouraging others was brought up again in this connection.

At the chairman's request, Dr. Masland presented a brief outline of a kind

of academic course in which participation by students in working out the design of the course, what they are to study, and how they are to study it, contribute toward learning human relations. The group seemed pretty well agreed that this area—of inter-personal relations and personal responsibility—is too often left to chance, or at best to extracurricular activities. The chairman pointed out a criticism of our educational system which he has heard, namely that in high school and in medical school, and usually in the college years between, practically all decisions of any importance are made for the student, who then, when he enters practice, finds himself in a position where he has to make all decisions himself.

Dr. Gregg gave a definition of strategy and tactics, and pointed out that practice in making decisions in college is usually ignored, since we seldom give the student in college the opportunity to accept the responsibility for strategy —deciding "when and on what to engage his strength," and not even very often do we give him the opportunity to decide on tactics—"how to reach the ends defined by strategy." About the only area in which the student makes many decisions for himself is the area of extracurricular activities. It was further pointed out that such activities are also helpful in teaching the student to get along with other people.

"How Should an Admissions Committee Function?"

Round-table Members: William Beckman, George Packer Berry, John Stalnaker, and F. J. Mullin, *Chairman*

All agreed that it is the responsibility of the medical school admissions committee to select, in a fair and unbiased manner, those applicants best fitted to profit by their medical schooling and thus return to society, through the advancement of medical knowledge or the extension of medical care, the value which society merits and expects from those in this field. Just how the admissions committees of the various medical schools are to function becomes a difficult problem in the light of the sometimes considerable differences in aims, methods, and resources of the several schools, and in the necessity of choosing approximately 7200 individuals from some 22,000 who made well over 81,000 separate applications, as was done for the entering freshmen this fall.

We all realize the necessity of forming judgments about the applicant's intelligence, character, personality, and motivation, and of obtaining information about his past experiences, educational background, habits of study, etc. There is general agreement as to how these various factors may be assessed, but no agreement as to specific details of evaluation. Sources of information lie in *biographical material* supplied by the applicant,

college or university *grades,* the *nature of the courses* taken in preprofessional preparation, the *particular school* or schools attended with recognition of their varying standards, *recommendations* from those who really know the applicant among the all too frequent letters obviously sent from social or political expediency, personal *interviews,* and various *test scores,* particularly the Medical College Admission Test sponsored by this Association.

Actually, our panel confined itself largely to considerations of the use of the M.C.A.T. and to a joint discussion of the value of interviews with the members of that roundtable during the last hour of our time.

It was apparent from the repeated questions and comments about the specific details of the use of M.C.A.T. scores that many people, in exploring the value of the test, are doomed to disappointment through expecting a one-to-one correspondence with particular or total test scores and achievement in medical school. Why one should lose faith in the test because the scores, say, on Understanding Modern Society, do not correlate high with grades obtained in gross anatomy, is somewhat difficult to understand. It was brought out in the discussion that the M.C.A.T. should not be used, strictly speaking, as an aptitude test, but rather as an appraisal of two aspects: 1) *general ability* with separate components of linguistics and quantitation, and 2) *achievement in certain areas,* specifically science and social studies. We are still in a period of experiment and trial in the use of this test, just as we are in handling recommendations, interviews, biographical information, etc. The M.C.A.T. is certainly not a device to eliminate thinking on the part of an admissions officer or committee. The discussion brought out the value of the test as a diagnostic instrument to be used in conjunction with much other information, and to be interpreted in the light of other evidence, rather than to expect it to be a good prediction of specific grades in medical school.

A discussion of the time of offering the test brought out the idea that, while scores on such tests tend to be somewhat higher as a student goes through the several years of college, there is really no significant difference between taking the test in May or November of the same year. The student who puts off the test for a few months thinking thereby to improve greatly his scores does not realize the significance of what the test is trying to find, or that an increase of twenty or thirty points on the total score doesn't have a great deal of meaning in itself, although it is true that a given difference in score is less significant at the ends of the scale than near the 500 mark.

There were a number of questions about the repetition of the test and the chances of the improvement of a student's score thereby. In general, such repetitions do not really increase the score when taken on a chance basis. There is, in fact, a tendency for regression toward the mean. If a student is actually ill and not just sick from having subjected himself to the test, any increase in score may be a measure of the extent of his illness at the time of the first test.

It was brought out in the discussion that the real function of the admissions committee is to discriminate carefully and fairly among the various applicants,

and that the use of a set formula ascribing definite weights to grades, test scores, recommendations, interviews, etc., tends to remove or dilute from the selection procedure the character of careful, competent judgment on an individual basis.

There seemed to be no great desire on the part of the roundtable to change the present procedure of regarding the details of the test and the individual scores as confidential, in view of the fact that the test is still in a trial period and that its use by various schools varies greatly, and to make scores public might place too much emphasis on the score as such, rather than the use of the score with varying degrees of emphasis by the different schools as a guide and supplement to other factors in choosing students.

Actually, the problem consists of evaluating the applicant as an individual human being seeking opportunity for a medical education and qualification as a practitioner of medicine and an investigator in this field. Thus, as much and complete information as possible about all facets of the applicant as a biologic organism operating in a social world is desirable. The kind of people we are going to get into medicine will depend upon how wisely and fairly the admissions committees make decisions and interpret and weigh the significance of the interview, grades, test scores, recommendations, etc.

Mr. John Stalnaker, the Director of Studies of the Committee on Student Personnel Practices, reported on studies being made by the central office of this Association and indicated the desire of this Committee to be of as much aid as possible to the admissions committees of the various schools.

Finally, there was some discussion of the problem of multiple applications and offers of acceptance. Policy in various schools differs markedly in this regard, some schools having already selected in October some students for next year's class, while the decisions of other schools will not be made until next June. It is evident from the wide variation in the ratio of entering students to the number of applications accepted and deposits paid at various schools that the policy of even giving consideration to applicants who have paid a deposit elsewhere is quite different in different schools. The general sentiment of the meeting was in favor of giving students as fair a break as possible and giving them a wide choice of opportunity in going to the school they desire. Because of the great variety of opportunities available and the many good students seeking admission, the schools need not engage in unseemly competition to grab off even a few of them. There was much support for setting a date before which the student will not be required to commit himself definitely, this date to be late enough so that most offers will be available to the student before he has to make a final decision, without prejudging his chances of selection by the school of his first choice.

In conclusion, it was apparent from the interest and participation in this discussion, that much thought is being given to this subject and many schools are carefully examining their procedures in an effort to improve the selection of students exposed to a program of medical education.

How Can the Interview Contribute Most in the Selection of Medical Students?

Round-table Members: Trawick Stubbs, *Chairman*, W. W. Morris, D. Bailey Calvin, Carl A. Whitaker (by telephone).

First, we may well ask what "the interview" is and what it contributes. Obviously it is not a single entity, but represents a variety of situations ranging from a brief casual conversation to a formal, highly organized and formidable grilling. To some it means person-to-person conversation; to others, individuals appearing before a committee—or several students, with several interviewers, or even a fairly large student group in a discussion led by one or more faculty members.

The title of the panel implies an emphasis on the interview as an evaluation procedure, but this is only one of several functions of the interview. Other functions mentioned include—in addition to (1) evaluating applicants—(2) establishing a desirable relation with the student, (3) filling a need in a public relations function, and (4) education of the interviewers (faculty).

Other pertinent points include actual clinical psychological appraisals or psychiatric screening, and certain problems of vocational guidance—especially for applicants who are not accepted.

Regarding relationships with the student, emphasis ranged in the discussion from comment on the simple right of a student to present his case to the difficult problem of establishing the confidence in the accepted applicant that he will be an acceptable and valuable member of the medical school family. If medical schools hope to produce physicians who think of the patient as a person, the initial interview offers an opportunity to establish at the outset a relationship in which the school and the faculty think of the student as a person.

Comment was also made on the value of strengthening the bond between the medical schools and the arts colleges and the opportunity for extending the interview capacity of the medical school by working closely with the college advisors.

Appreciation was expressed for the almost unanimous response that was received from a postal card that was sent to all the deans several months ago. The results reflected a distinct paucity of efforts to measure the effectiveness of the interview as an evaluative procedure. However, several studies of this type have been made or are now in progress. In general the validity of the procedure was dependent on the opinions of those using interviews that the procedure is helpful.

When opinions were solicited from the various medical schools with regard to the interview, a number replied commenting on the difficulty of making an objective study of such a subjective procedure as interviewing. While this may be true, as evidenced by the attempts made by the OSS staff during

World War II and more recently by the University of Michigan Project on the Assessment of Clinical Psychologists, the difficulties involved are not insurmountable. It seems important to stress that objective evaluation is possible in direct relation to the clarity with which the interviewer understands what he is interviewing for and that these objectives of the interview be clearly defined in advance. Of equal importance, of course, is that the personality characteristics to be evaluated be of a type which can be estimated in a relatively brief period and that seem related to the general question: "Is this candidate suitable to study medicine and eventually to become a member of the medical profession."

In order to give objective evidence in support of the measurability of interview results and to indicate the kinds of questions which may be given objective answers, one of the panel members (Dr. Morris) reported on the studies currently being carried forward at the State University of Iowa College of Medicine. Copies of their interview rating form comprising thirteen variables believed to be relevant to the characteristics desirable in medical students and physicians along with a fourteenth rating entitled "overall fitness for a career in medicine" were distributed along with several tables presenting statistical analyses of the results of the use of this form over the past two years.

These results were presented to demonstrate the manner in which interview results might be tabulated and studied objectively. More specifically, the data were presented in answer to three questions:

(1) How well were the interviewers able to differentiate between the candidates eventually accepted and those eventually rejected when the interview findings were not used in the actual selection process?

(2) Which characteristics were, in the opinion of the interviewers, most important and which were of least importance in relation to the rating of "overall fitness for a career in medicine?"

(3) Is there evidence for reliability in interviewing?

In answer to these three questions, data were presented to support the following conclusions:

(1) The Iowa panel of five interviewers the first year (1948-1949) and of nine interviewers the second year (1949-1950) were able to differentiate between the accepted and rejected groups on all fourteen ratings to a degree significantly better than chance at better than the one percent level of confidence.

(2) The rank order of correlation coefficients between the first thirteen personality characteristics and the rating "overall fitness for a career in medicine" suggested three clusters of characteristics: Of first importance, in the opinions of the interviewers, were such attributes as general alertness, ability to present ideas, self confidence, motivation for a career in medicine and earnestness about a career in medicine. Of intermediate importance were emotional stability, judgment, perspective and independence of thought. Of least importance, yet still significantly correlated with the overall rating were

such superficial qualities as general appearance, quality of voice and speech, social and recreational interests and, finally, and, perhaps, of some propaganda value, family background.

(3) The reliability of the subjective estimates made by means of interviews was studied from data obtained during the past year when each candidate was provided two independent, individual interviews with two different members of the admissions committee. The evidence is strikingly in favor of reliability as evidenced by the fact that perfect agreements between the ratings of the two interviewers ranged from 42 percent to as high as 58 percent and when pairs of ratings which disagreed by only one point were included as indicating essential agreement between the two raters, the agreements ranged from a low of 86 percent essential agreement to a high of 98 percent essential agreement. These latter findings were supported during the round-table discussion by the experience with the same rating form at Colorado where each candidate was interviewed jointly by two members of the admissions committee. While the Colorado experience has not yet been tabulated, they report the agreement between the two raters was dramatic.

Two important factors were stressed: first, that the characteristics to be rated were clearly defined so that each rater held a fairly consistent concept of the meaning of the attribute to be rated in common with the other interviewers, i.e., no vague concepts such as "moral integrity" or "strength of character" were included; and second, that each interviewer, while provided with the rating form as a common framework within which to work, was permitted complete freedom in approaching the interview situation in his own way. When approached thus, it is felt that the interview becomes somewhat synonymous with clinical diagnosis and everything which is implied by that technique so basic to medical practice.

Dr. Calvin stressed the fact that industry has found interviews to be worth a great deal and are worth financing. He stressed the point that in these instances objectives are determined in advance, and the procedures are carefully set up to accomplish the desired result. No suggestion is implied that we adopt industrial methods—rather the emphasis is on the principles involved —namely, care and attention to purposefulness. The use of interview results should be limited to screening and elimination and only in direct proportion to the time and effort spent in the process of interviewing and the care given to evaluation of results.

Since the discussion on interviews was so closely related to the discussion of the admissions committee functions, our discussion group joined that group for the last 30 or 40 minutes of discussion.

The results of the discussion on interviews in both the smaller and larger group will be summarized without any effort to give individual credit to the persons who participated in the discussions.

How Can the Interview Contribute Most?

First, by having clearly defined objectives. It is easy to let this become a

routine procedure, with its value being taken for granted; or it may even resemble at times a fetish. Clearly defined objectives are important.

Second, it is important to recognize the limitations of the interview. Some things can be accomplished by an interview and others cannot. The interview can contribute more if its limitations are clearly recognized.

Third, the interview can contribute most in selection if it is used as part of a total, integrated process, including the other valid methods of evaluating students.

Fourth, the interview should be determined by local needs and conditions. There is no one single "right way." It calls for constant reexamination and critical appraisal by the persons involved locally.

Fifth, the growth and increasing skill of the interviewers is accomplished by continuing self-examination.

Student-Patient Relationships in Outpatient Teaching

Round-table Members: R. H. Oppenheimer, *Chairman,* Henry J. Bakst, Theodore H. Harwood, A. C. Bachmeyer and Kenneth B. Turner.

Opening Comments by the Chairman, Dr. R. H. Oppenheimer:

(1) The title of this Panel is incorrect. (2) The student must assume the attitude of a doctor. (3) Scientific progress in medicine has been thrilling. (4) All change is not progress. The proven values of today cannot be cast aside. (5) An understanding doctor-patient relationship is one value which has stood the test of time. (6) The doctor-patient relationship is the basis for the effective application of scientific knowledge. (7) The failure of good doctor-patient relationships is the basis for the development of cults and the present public attitude toward the medical profession. (8) The term "chief complaint" directs attention from the patient to a disease. (9) The expression "the patient's problem" directs the student's attention not only to a search for a diagnosis but also to the patient as an individual and makes him inquire as to what made the patient seek the help of a doctor. The latter is found in some disturbances of comfort, recreation, rest, or his ability to earn a livelihood or meet his responsibilities. Outline of topic:

1. The meaning of student-patient (in reality doctor-patient) relationship in terms of the objective of medical education and the necessity for adequate guided experience.

2. The importance of the Outpatient Department as a source of experience in the student-patient relationship.

   (a.) These patients are representative of the majority of patients the doctor will see in practice.

   (b.) The problems of these patients accurately and abundantly represent

the problems in which the doctor-patient relationship plays an important, if not dominant, part in the management of the patient.

3. Requirements for meeting this challenge effectively:
   (a.) Greater appreciation of the importance of outpatient services by members of the faculty of the medical school and the staff of the teaching hospital.
   (b.) Guidance of students by senior members of the faculty or those who appreciate fully the doctor-patient relationship.
   (c.) Daily time assignment of students to the outpatient department adequate for thorough study and understanding of the patient and his problem.
   (d.) Adequate length of assignment to the outpatient department and continuity of this assignment. The student-patient relationship cannot be established effectively in one visit.
   (e.) Organization which permits the student to see patients on return visits together with the teacher who saw the patient at the first visit.
   (f.) The outpatient service is probably more suitable to senior student than to junior student experience.

DR. HENRY J. BAKST: Fourth year students at Boston University are assigned to the Home Medical Service of the Massachusetts Memorial Hospitals for periods of one month. The Service operates from the Outpatient Department and provides medical care for the medically indigent living in a specified area about the hospital. Students are given primary responsibility for medical care by making the first visit to the patient alone, establishing a diagnosis and deciding on the treatment. Cases are then checked by a third year resident who acts in the capacity of a consultant to the fourth year student. All cases are reviewed daily by the director of the service. Residents on this service also work in the general medical clinics in the outpatient department so that cases referred to the hospital have continuity of care. Students have access to the wards when a patient is hospitalized but then is no longer responsible for medical care. Closely integrated in this program is the teaching service of many departments. It is administered by the department of Preventive Medicine but participating actively are the departments of Medicine, Psychiatry and Microbiology. There is also an intimate relation in the Social Service department and great assistance is received from the Visiting Nurse Association.

Another function of the Home Medical Service is the Family Study Program in which third year students are assigned to a family which has been under the care of the Home Medical Service. Families are selected on the basis that one member has a chronic illness and that the family unit contains several small children. The third year student, acting in the capacity of medical advisor to that family, maintains responsibility for their care through the entire third and fourth years. This program is aimed at:

1. Providing continuity and giving responsibility to the student inpatient care.
2. Long term observation and management of chronic disease in the home.

3. Study of family interrelationships in illness and in health.

4. Observation of social and environmental factors in relation to illness.

5. Application of the concepts of preventive medicine (immunization of children, etc.).

DR. THEODORE H. HARWOOD: The features of our local arrangements for outpatient teaching in Burlington are perhaps unique in several respects:

1. It is a small city, 29,000, with a single outpatient department run jointly by the city funds, and managed by the Medical School. I have been in charge for ten years and personally run the medical clinic. It has assumed the aspects of a private practice in that I know personally most of the patients and their families.

2. We have an extramural service in connection with the dispensary, and students make home calls under direct supervision of a fellow in the department of Medicine. They are followed at the local hospitals by the students so they know the hospital experience of their patients. They are well aware of the financial and social background, since they see the patients in the home. They often personally contact the social agencies where there is need. They also see the patients at the outpatient clinic in the afternoon, where there are facilities for laboratory work, fluoroscopy, etc.

3. The Juniors work in the outpatient clinic in the afternoon, under my direct supervision. Each patient becomes the patient of a particular student for the month he is on this service, and each time the patient returns, he comes to the same student. Thus a relationship becomes established which is like the relationship of a practicing physician to his patient. The attending knows most of the families and the background, often the family connections. We have watched many patients grow up under our supervision.

4. We have a senior member of the Medical Department in charge—the associate professor of Medicine. This is necessary, as in our setup we have juniors in the outpatient clinic. Clinics are held daily.

5. Emphasis is made on the functional nature of disease, as it is so important in this class of patient—all of them of low income, most of them having large families. Emphasis is made on clinical findings, and careful thought is given before elaborate and expensive laboratory work is ordered at the hospital laboratories.

6. Clinic hours are in the afternoon, allowing plenty of time to do a complete work-up on patients. The students readily stay at the clinic until 5 or 5:30 in the afternoon if it is necessary.

7. There is a greater importance of the enthusiasm of the instructor in this department, for there is often no long list of laboratory reports to start one off on a lecture of some phase of water-balance, for instance. There is always the possibility that the patient may be labeled a "crock" and dismissed with some phenobarbitol unless the instructor has the enthusiasm to point out all the various factors of the social, family and economic background of the

situation. Discussions are held after each patient is seen with the student. The personal acquaintance of the instructor is especially valuable here.

8. The Visiting Nurses headquarters are in the same building, and are available for personal contact. We often talk over the problem with the nurse who is to make the call. This gives valuable additional information.

9. We attempt to treat in the clinic most of the simple uncomplicated conditions rather than refer them all to the specialty clinics, often held at other hours and at other locations. Scabies, impetigo, pink-eye, gingivitis, and gonorrhea, for instance, are diagnosed and treated in our clinic, and referred to the specialty clinics only when there are complications or unusual features. This we feel is important in training for general practice.

DR. A. C. BACHMEYER: While I feel that it is important that the student have good training on the wards, the material reduction in length of patient stay has reduced his chance to study these cases at great length. In other words, the practice of early ambulation and early discharge from the hospital narrows the segment of teaching in this particular area. The outpatient department could provide the student with an opportunity to study the patient before he is in the hospital as well as to follow through after his discharge.

I have been wondering whether it would be possible to revise our whole thinking about inpatient and outpatient student assignments and to go to what might be called a "case method" in which the students would be assigned patients when they first came to the outpatient department and follow them through during their entire period of illness. This would require a very considerable revision of our schedules and might not be possible. I have not discussed this proposal to any extent and do not know if this method of instruction has been tried anywhere. I can see that it would involve considerable difficulty so far as the student assignments are concerned but believe that if such an arrangement could be developed it would materially improve continuity of the student's instruction in the clinical branches.

DR. KENNETH B. TURNER: All patients are assigned to fourth year medical students at 9 A.M. daily. Student is alone with patient and complete clinical workup, together with routine laboratory data, is finished by noon. Females over 40 have routine cervical smear for cytological study and it is planned to have routine chest photofluorograms for all patients.

The patient then returns at 2 P.M. and is seen by the fourth year student and an attending physician. If a consultation is desirable for definitive diagnosis, the patient is also seen by a consultant from the indicated special service. These consultants are available to the Group Clinic and the consultation is held in the presence of the fourth year student and the attending physician. If the patient is to return, he is given an appointment to return on a day when he will be seen not only by the same fourth year student but by the same attending physician as well.

The Medical staff of the Group Clinic and the House Visiting staff are more or less identical. The level of outpatient department instruction and quality of medical care are both of very high calibre.

Specific Internship Requirements for Licensure—Yes or No?

Round-table Members: John L. Caughey, Jr., *Chairman,* John Leonard, Robert F. Loeb and Francis Wood.

This panel did not discuss the relative merits of different types of internships, but confined its attention to the question of whether specific types of internship should be required as a prerequisite for licensure. Consideration was also given to the problem of what steps might be appropriate if the Association wished to concern itself with the situation created by the present requirements of some states and territories.

The Panel voted unanimously to present the following resolution for consideration by the Association:

"Resolved that the Association of American Medical Colleges is opposed to the principle of restrictive internship requirements as a prerequisite to state licensure, and approves the appointment of a committee to study this problem in cooperation with the Federation of State Medical Boards of the United States of America."

Postgraduate Medical Education

Round-table Members: Robert Boggs, *Chairman,* George N. Aagaard, Charles Smyth and John B. Truslow.

There was general agreement that postgraduate education is that phase of the physician's development which begins at graduation from medical school and lasts throughout his professional career. A few men, however, preferred the use of the term "continuation education." There was general dissatisfaction with the application of the titles "graduate" and "postgraduate." To some they were synonymous, to others each word had a distinct connotation. A clarification of these terms is long overdue.

It was generally agreed that the postgraduate or continuing education of the physician must be primarily the responsibility of the universities. Obviously, the medical colleges, due to limitation of personnel and budget, are unable to carry the full load. They can, however, initiate and give leadership to postgraduate medical education, both in their own institutions and in the hospitals located in their area or region, thus greatly extending their effectiveness. On many occasions it has been found helpful to consult with the state and county medical societies and other professional groups.

The potentialities of the regional hospital as a vigorous center for the

continuing education of the medical profession has been successfully demonstrated in the several university decentralized programs.

During the discussion it was emphasized over and over that there was a great variation in the intellectual needs of the practicing physicians, ranging from those who seldom, if ever, read a medical journal to those who are thoroughly conversant with the problems of ACTH and cortisone.

Discussion also centered around the relative merits of didactic presentation versus bedside teaching or conferences. It appeared that a judicious mixture of all three elements is most effective.

In summary, postgraduate medical education has received increasing attention each year since the end of World War II. Each year has seen a gain in the number of programs sponsored by medical schools and increasing amounts of funds have become available for support.

Should Medical Colleges Take More Responsibility for Recognition of Graduate Training?

Round-table Members: Ward Darley, *Chairman*, Frode Jensen, Edward H. Leveroos and John Alsever.

The panel discussion was introduced by the presentation of the following information:

A recent release by the American Medical Association reveals that between the years of 1938 and 1949 the number of physicians in private practice in this country has increased 19 percent (169,628 to 201,277). Over the same period of time the number of full-time specialists increased by 98 percent (28,018 to 54,891). While these increases have been considerable, it is noteworthy that there has been a decrease of 13 percent in the number of general practitioners (109,670 to 95,526).[1]

The 1950 American Medical Directory lists 64,455 physicians who limit their work to specialism. This figure includes all specialists—not just those in private practice. Of these, approximately 37,450 or 58 percent are certified.[2]

At the present time the total program of specialty training in this country involves 1,079 hospitals and 18,669 residents. It is estimated that 2/3 of the residencies in internal medicine are in medical school sponsored programs, and that, although no accurate statistics are available, a similar ratio probably applies in the other specialties. It was not possible to give an estimate of the number of hospitals involved.[3]

Correspondence with the various American Specialty boards revealed information which is summarized in the following table.

AMERICAN BOARD EXAMINATION EXPERIENCE: 1949
(Information Obtained by Correspondence)

Boards Reporting Which Give Parts I and II:	*Part I* No. Taking Examination	*Part I* Number Failing or Conditioning Examination	*Part I* Percentage Failing or Conditioning Examination	*Part II* No. Taking Examination	*Part II* Number Failing or Conditioning Examination	*Part II* Percentage Failing or Conditioning Examination
1. Anesthesiology	308	93	30	151	38	25
2. Dermatology & Syphilology	167	55	33	182	54	29
3. Internal Medicine	1182	422	35	583	247	42
4. Obstetrics & Gynecology	304	39	13	313	54	17
5. Ophthalmology	339	206	60	293	110	37
6. Orthopedic Surgery	331	41	12	174	36	20
7. Surgery	863	255	29	710	255	36
8. Urology	113	8	7	107	18	17
Total, or Percent Average	3607	1119	31	2513	812	32
Boards Reporting Which Give Total Examination at Once:						
9. Neurological Surgery				46	15	28
10. Pediatrics				298	59	20
11. Physical Medicine and Rehabilitation				40	8	20
12. Psychiatry & Neurology				700	280	40
Total, or Percent Average				1084	360	33

Boards Giving Incomplete Information: 13. Plastic Surgery (No information for Part I)
Boards Reporting No Information Available: 14. Otolaryngology 15. Radiology
Boards Not Reporting: 16. Pathology
Boards Not Contacted: 17. Preventive Medicine and Public Health 18. Proctology 19. Thoracic Surgery (New Boards)

The discussion that followed the introduction of the above informative material indicated definite concern over graduate medical education as it pertains to the present and the future. This brief report will summarize the type and the nature of some of the questions raised.

There was interest in the change of the specialist-general practitioner ratio that has occurred to the disfavor of the general practitioner during the past ten years. It was felt that the philosophies and objectives of graduate medical education should be reviewed, and this within the very near future.

Questions such as the following were posed:

1) What is the aim of graduate medical education—a certificate or an education?
2) Does graduate education in medicine involve any philosophical or broadening considerations or is it primarily concerned with the development of technical skills and judgment ability?
3) How many specialists and how many in each category should be trained?
4) What should the ratio be between specialists and general practitioners?
5) Should the general practitioner receive special training comparable to that of the specialist?
6) Is the general practitioner or family doctor to gradually disappear from the picture of American Medicine, and if so, why?

World War II gave specialty training a tremendous impetus. Now that we may be close to World War III or at best a prolonged period of war economy with all of the controls and regimentation that must go with it, a

determination of the numbers and categories of specialists needed, together with a consideration of the number and types of general physicians needed, might represent a wise move, particularly from the standpoint of economy of manpower and teaching effort. It appeared to many members of the panel that in addition to being of importance to a satisfying type of civilian medical care, properly trained general practitioners might be of particular value to the armed forces.

The panel demonstrated considerable concern over the better than 30 percent average failure rate of the candidates for specialty board certification. It was felt that if undergraduate medical students failed in their objectives at anything near the same rate, the situation would be placed under immediate and critical public scrutiny. The high failure rate caused the panel members to question:

1) Methods used in the selection of graduate medical students.
2) The methods of accreditation of institutions offering graduate medical training.
3) The adequacy of the training programs in accredited institutions.
4) The methods of examination for certification.

The supervised practice requirement between completion of formal training and the formal examination was given some discussion and the question was raised that perhaps this practice experience has been placed at the wrong end of the training spectrum. In other words, it was suggested that requiring a two or three year experience as an assistant to a competent general practitioner or a specialist before starting formal training might be of more value than after its completion. Practice association or supervision both before and after formal graduate training was also mentioned.

The correspondence with the Specialty Boards revealed that while their files on individual candidates contain much very important data, they are not in a position to analyze it as to educational and other background. It should be obvious that any consideration directed to improving the picture in graduate medical education would be greatly enhanced if this data could be tabulated and analyzed. If the Boards would be willing to make this information available to the Association of American Medical Colleges, the Association has the personnel and the equipment capable of doing the work. The panel recommends, therefore, that the Association make an effort to obtain this data for analysis.

The following statements are those of the panel leaders: It is unfortunate that during the early period of the development of specialty training, the medical schools played a very passive role. The development of graduate training in this country was taken on for the most part by hospitals and their staffs. It is little wonder, then, that agencies independent of our medical schools have developed and tended to control the picture in specialty training. Belatedly the medical schools, largely through their teaching hospitals, began to come into the situation and recently a few schools have incorporated their

residency programs into their graduate schools. The recent tendency of the American Medical Association Council on Medical Education and Hospitals to not approve one year residencies is tending to influence many nonuniversity connected hospitals to seek various types of medical school affiliation. While the steadily increasing activity of our medical schools in the field of graduate medical education may be for the good, it is felt that the overall picture will not improve, as it should, until many of the problems raised by this panel have been dealt with in a realistic and objective manner. As this re-evaluation takes place and attempts are made to activate solutions to these problems, the medical schools of our country will have much to offer and also much to gain.

REFERENCES

1. "Comparisons of State Physician-Population Ratios for 1938 and 1949." Frank G. Dickinson, Charles Bradley, and Frank V. Cargill. Bulletin 78, Bureau of Medical Economic Research. American Medical Association, 1950.

2. *Directory of Medical Specialists*, 1949, Vol. 4, Advisory Board for Medical Specialities, A. N. Marquis Co., Chicago, lists 29,000 living certified specialists as of July, 1948. *The American Medical Directory*, American Medical Association, 1950, 18th Edition, lists 8,450 specialists certified between July, 1948 and July 1950. The figure 37,450 represents the total of 29,000 and 8,450. This figure is not corrected for deaths of specialists between July 1948 and July, 1950, and for a handful of certified specialists living in U. S. dependencies, Canada and other foreign countries.

3. Personal Communication from Dr. Edward H. Leveroos, Associate Secretary of the American Medical Association Council on Medical Education and Hospitals.

Prepaid Medical Care Plans in Relation to Medical Education

Round-table Members: Edward L. Turner, *Chairman,* Stanley W. Olson, *Recorder,* James M. Faulkner, James N. De Lamater, Frank S. Smith.

The discussion was opened by the chairman with a statement reviewing the trends in financing of medical care in the United States during recent years. It was indicated that prior to the depression of the late twenties and early thirties, medical care was financed individually or, for those unable to pay, through city, county or state institutions. Traditionally, in our social and economic scheme, the larger part of medical teaching in the past has been carried on in the large public hospitals housing publicly supported patients.

Obviously many factors have played roles in bringing about increased interest in prepaid medical care. Costs associated with illness today are high. Hospital care factors may present almost insuperable barriers to large segments of the population unless they are protected through some form of insurance.

One of the county medical societies in the State of Washington organized a voluntary prepayment medical care program in 1917. Real interest in such developments began during the depression. Once initiated, and proven successful, voluntary health coverage in this country has grown with almost unbelievable rapidity, so that by 1949 approximately 61,000,000 people had hospital expense coverage, 34,060,000 surgical coverage, and 12,898,000 were covered

by medical expense plans. More than 93 percent of the hospital expense coverage and practically all of the surgical and medical expense coverage has been developed during the past ten years.

Besides the voluntary prepayment medical care plans, it was pointed out that numerous plans are now in existence that actually fall under the heading of compulsory prepaid medical care. In these plans, employers deduct a certain percentage of the employee's wage and add to it a matching fund believed to be adequate to cover employee's health contingencies. Such plans are arranged so that it is not a matter of voluntary subscription to the program, but a compulsory contribution if an individual is to enjoy employment.

Furthermore, compulsory health insurance on a national scale has repeatedly been advocated during the past two decades. It is one of the great issues fostered by our national government. Far reaching implications of highly controversial nature, ranging from the sublime to the ridiculous, are involved in the arguments for such programs. Regardless of its defects or merits, the very fact that nation-wide compulsory insurance has such large numbers of supporters, makes it important to consider the potential impacts of a program of this nature on medical education. Practically all these plans are based on free selection of the physician of choice, removing the patient from the category of the ward, charity or indigent, and placing him in the private patient bracket. The panel believes that the significance of this has not been appreciated clearly by many individuals engaged in medical education and that it is deserving of their serious thought.

In addition to voluntary and compulsory prepaid health plans, welfare programs in some of our states have been created which present new aspects of tax-supported prepaid medical care. The experience of the State of Washington was cited as an example of some of the problems that may arise in connection with medical education in programs of this type. The so-called "Citizens Security Act" of 1948 in Washington, otherwise known as Initiative 172, well-nigh wrecked the clinical teaching program at the University of Washington Medical School before the combined efforts of the University, organized medical profession, hospital authorities, public welfare department, the Governor, the Attorney General and others temporarily unraveled the situation. The Act fostered by the Washington old-age pensioners, the "pioneers" mentioned in the Act, not only involved old-age pensions, etc., but also "in addition to senior citizen grants, each recipient who is in need of medical and dental, and other care to restore his health shall receive: (a) medical and dental care by a practitioner of any of the healing arts licensed by the State of Washington of recipient's choice; (b) nursing care in applicant's home and hospital care as prescribed by applicant's doctor and ambulance service; (c) medicine, drugs, optical supplies, glasses, medical and pharmaceutical supplies, artificial limbs, hearing aids and other appliances described as necessary; provided that when Federal matching funds become available for this program, it shall be the duty of the state to accept such matching funds until such time as this section shall be financed from state and county funds." Thus,

this Act made every recipient of public welfare a private patient, able to select the physician of his choice.

The resultant impacts on hospital admissions, the omission of a clinic as a resource for medical care, and inclusion only of physician of choice, raised issues of importance in hospital maintenance, for under the Act, hospital income became dependent on "per diem" care of recipients based on an analysis of hospital cost factors.

The effect on the teaching service immediately reflected itself, as the public county hospital now became a public tax supported private hospital. In order to support hospital operations, the closed teaching staff then had to be increased markedly. Time does not suffice to outline the entire problem, but this example should suffice to illustrate a "trend of the times" and its potential reflections in medical education. Had it not been for the sincere interest and cooperation of the local and state medical societies in the welfare of the state's new medical school, the clinical teaching program could have been damaged irreparably.

Following these introductory comments, the round table discussion was centered around the following points:

(1) The round-table group felt that the gradually increasing number of individuals protected by prepaid medical care plans, voluntary, compulsory, Veterans' Administration, or of welfare nature, has reduced and will continue to reduce the number of patients in public hospitals who seek care at the hospital or clinic because they cannot pay fees to private physicians. There is an ever increasing number of individuals, even in welfare programs, whose benefits permit the free choice of physician.

(2) It is obvious that if schools are to maintain proper supervision of clinical departments in public teaching hospitals, that such prepayment plans, particularly tax supported welfare plans, should permit freedom of choice of a clinic or public hospital manned by a teaching faculty, as well as freedom of choice of a private physician.

(3) It is necessary for medical schools and clinics to be in a position to accept the traditional policy of many teaching hospitals and schools of turning away all individuals whose care is covered by themselves or by prepaid programs.

(4) Teaching can be done on medically solvent, as well as on medically indigent, providing we do an effective task of educating the public as to the kind of medical care available under the supervision of the medical faculty. The "bug-a-boo" of the teaching patient as a guinea pig in the eyes of the patient, the student, the physician, etc., must be overcome, and the advantages of care in a teaching institution emphasized.

(5) Prepaid medical care for all implies conflicts with the medical profession for fees for services. Here problems must be faced frankly, discussed freely, and worked out effectively with the local, county and state medical organizations. Thus, the problem of education within our own professional group is an essential factor in the solution of this problem.

(6) There is a need for medical schools to be more positive in their public relations approach to problems of this nature.

(7) At present, prepaid medical care programs are obligated to pay a physician, not a clinic. When the physicians within a clinic group are paid fees for medical care and such fees then turned over to hospital or school by full time staff, Internal Revenue income tax problems arise. With Internal Revenue being increasingly critical and scrutinizing all aspects of income, this problem will have to be carefully analyzed.

(8) The attitude of the staff is largely responsible for determining who is a teaching patient. The increasing prepaid medical care plans obviously implies that private patients must become more widely used as teaching patients. Here staff attitude and student approach, based on proper preparatory training, patient and public education must all be emphasized. Actually, the use of the private patient should prepare students better for practice. It will require the maximum use of tact, good judgment and consideration as an immediate part of training.

(9) The use of the teaching clinic for referral as a diagnostic and/or therapeutic center with referral back to physicians with complete reports emphasized should serve to strengthen the relationships between a teaching faculty and the outlying profession.

(10) It was suggested that lessons might be taken from the dental school clinic pattern. Such schools take only the patients needed for certain teaching experiences, only one quality of care is given—the best. If the patient comes with a condition not of teaching interest, the patient is not taken, but is referred elsewhere. It was pointed out that this can be done more readily in a private teaching hospital than in a public supported teaching hospital.

(11) Concern was expressed over the fact that not many present graduates and large numbers of physicians have adequate knowledge regarding prepaid medical care plans, their simple business aspects and implications, and that there is need to give recognition to basic information in this area as a responsibility of medical education.

In view of the rapidly changing social aspects of medicine and its economics, it is felt that undergraduate and graduate instruction in current developments in prepaid medical care plans is a responsibility of medical educators. It is, therefore, recommended that a resolution be presented to the Association for adoption to the effect "that a liaison committee be established in the Association to coordinate developments in prepaid medical care plans in their possible relation to medical education."

If We Need Acceleration

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There have been many suggestions that in the present emergency the professional schools, particularly medical schools, accelerate their programs, thus graduating more trained men and women. Several objections have been made to these proposals. It is in the hope of meeting these objections and still providing a workable plan to increase the number of graduates from our medical schools that the following proposal is made.

There are three essentials in the training of doctors—teachers, students, and equipment. If more doctors are to be trained, we must have more of each of these essentials or we must utilize those which we have to greater effect. There have been some objections to asking students and faculty to work four quarters or three semesters per year. The plan herewith submitted recognizes these objections and attempts instead a fuller utilization of the third essential, equipment and supplies, to realize effectively the objective of an accelerated program.

The proposed plan, which is essentially the more frequent admission of freshman classes, is easily adapted to either the quarter or the semester plan. A school organized on the quarter plan could graduate four classes in three years by the admission of a freshman class every nine months.

An illustration from the two tables below may serve to clarify this proposed plan. In accordance with the plan a freshman class, which is indicated on Table I by the letter A, would enter medical school on the quarter plan in the Summer Quarter, 1951, continue in school through three consecutive quarters, and go on vacation during the Spring Quarter of 1952. Students in class B would enter the first quarter of their freshman year during the Spring Quarter, 1952, continue in school through the Summer and Autumn Quarters of 1952, and go on vacation during the Winter Quarter, at which time students in class C would begin their freshman year. As can be seen from Table I, there would always be a freshman, sophomore, junior, and senior class in school, and, as can be seen from Table I-a, there would always be one class on vacation.

The following tables present a class plan for acceleration. In each case a letter of the alphabet is used to designate a class. The subscripts indicate the semester or quarter in school. In the case of the indications of classes not in school, the subscripts indicate the semester or quarter completed.

By the division of the school year into trimesters, the same plan might be applied to schools organized on the semester plan. It is suggested that freshmen could enter in the Summer Trimester of 1951, continue through the Fall Trimester, and be on vacation during the Spring Trimester, when students in class B would enter. Class B would continue through the Spring and Summer

Trimesters and be on vacation during the Fall Trimester, at which time students in class C would begin their freshman year.

Table II gives the plan of organization for acceleration of medical students in schools organized on the trimester plan; Table II-a indicates the class which would be on vacation each trimester.

One of the advantages inherent in the plan is its great flexibility. It could be inaugurated at any time, while all that need be done if the program is to

TABLE I
CLASS PLAN FOR ACCELERATION
QUARTER PLAN ORGANIZATION

	Summer	Autumn	Winter	Spring
1951-1952	A_1	$A_2\ X_4\ Y_7\ Z_{10}$	$A_3\ X_5\ Y_8\ Z_{11}$	$B_1\ X_6\ Y_9\ Z_{12}$
1952-1953	$A_4\ B_2$	$A_5\ B_3\ X_7\ Y_{10}$	$A_6\ C_1\ X_8\ Y_{11}$	$B_4\ C_2\ X_9\ Y_{12}$
1953-1954	$A_7\ B_5\ C_3$	$A_8\ B_6\ D_1\ X_{10}$	$A_9\ C_4\ D_2\ X_{11}$	$B_7\ C_5\ D_3\ X_{12}$
1954-1955	$A_{10}\ B_8\ C_6\ E_1$	$A_{11}\ B_9\ D_4\ E_2$	$A_{12}\ C_7\ D_5\ E_3$	$B_{10}\ C_8\ D_6\ F_1$
1955-1956	$B_{11}\ C_9\ E_4\ F_2$	$B_{12}\ D_7\ E_5\ F_3$	$C_{10}\ D_8\ E_6\ G_1$	$C_{11}\ D_9\ F_4\ G_2$
1956-1957	$C_{12}\ E_7\ F_5\ G_3$	$D_{10}\ E_8\ F_6\ H_1$	$D_{11}\ E_9\ G_4\ H_2$	$D_{12}\ F_7\ G_5\ H_3$
1957-1958	$E_{10}\ F_8\ G_6\ I_1$	$E_{11}\ F_9\ H_4\ I_2$	$E_{12}\ G_7\ H_5\ I_3$	$F_{10}\ G_8\ H_6\ J_1$
1958-1959	$F_{11}\ G_9\ I_4\ J_2$	$F_{12}\ H_7\ I_5\ J_3$	$G_{10}\ H_8\ I_6\ K_1$	$G_{11}\ H_9\ J_4\ K_2$
1959-1960	$G_{12}\ I_7\ J_5\ K_3$	$H_{10}\ I_8\ J_6\ L_1$	$H_{11}\ I_9\ K_4\ L_2$	$H_{12}\ J_7\ K_5\ L_3$
1960-1961	$I_{10}\ J_8\ K_6\ M_1$	$I_{11}\ J_9\ L_4\ M_2$	$I_{12}\ K_7\ L_5\ M_3$	$J_{10}\ K_8\ L_6\ N_1$
1961-1962	$J_{11}\ K_9\ M_4\ N_2$	$J_{12}\ L_7\ M_5\ N_3$	$K_{10}\ L_8\ M_6\ O_1$	$K_{11}\ L_9\ N_4\ O_2$
1962-1963	$K_{12}\ M_7\ N_5\ O_3$	$L_{10}\ M_8\ N_6\ P_1$	$L_{11}\ M_9\ O_4\ P_2$	$L_{12}\ N_7\ O_5\ P_3$

TABLE I-A
CLASSES NOT IN SCHOOL
QUARTER PLAN ORGANIZATION

	Summer	Autumn	Winter	Spring
1951-1952	$X_3\ Y_6\ Z_9$			A_2
1952-1953	$X_6\ Y_9$		B_3	A_5
1953-1954	X_9	C_3	B_6	A_8
1954-1955	D_3	C_6	B_9	E_3
1955-1956	D_6	C_9	F_3	E_6
1956-1957	D_9	G_3	F_6	E_9
1957-1958	H_3	G_6	F_9	I_3
1958-1959	H_6	G_9	J_3	I_6
1959-1960	H_9	K_3	J_6	I_9
1960-1961	L_3	K_6	J_9	M_3
1961-1962	L_6	K_9	N_3	M_6
1962-1963	L_9	O_3	N_6	M_9

Subscripts indicate number of quarters completed.

be discontinued is to postpone until the beginning of the normal academic year the entrance of a new freshman class.

This plan would be a simpler and more efficient way to meet what may prove to be a temporary need than would the establishment of new medical schools which might be forced into idleness at the end of the period of emergency. If on the other hand it develops that we will continue to need more trained physicians for several years to come this plan will provide the increase by utilizing existing facilities. Faculty which would be necessary might be obtained by using able men now in practice or research. Additional teach-

ing staff might be obtained from other departments on our university campuses or during the transition period the faculty might be asked to work four quarters per year as they did during World War II. During that war with many doctors in active service, we maintained our colleges on an accelerated program.

TABLE II
CLASS PLAN FOR ACCELERATION
TRIMESTER ORGANIZATION

	Summer Trimester	Fall Trimester	Spring Trimester
1951-1952	A_1	$A_2\ X_3\ Y_5\ Z_7$	$B_1\ X_4\ Y_6\ Z_8$
1952-1953	$A_3\ B_2$	$A_4\ C_1\ X_5\ Y_7$	$B_3\ C_2\ X_6\ Y_8$
1953-1954	$A_5\ B_4\ D_1$	$A_6\ C_3\ D_2\ X_7$	$B_5\ C_4\ E_1\ X_8$
1954-1955	$A_7\ B_6\ D_3\ E_2$	$A_8\ C_5\ D_4\ F_1$	$B_7\ C_6\ D_5\ F_2$
1955-1956	$B_8\ D_5\ E_4\ G_1$	$C_7\ D_6\ F_3\ G_2$	$C_8\ E_5\ F_4\ H_1$
1956-1957	$D_7\ E_6\ G_3\ H_2$	$D_8\ F_5\ G_4\ I_1$	$E_7\ F_6\ H_3\ I_2$
1957-1958	$E_8\ G_5\ H_4\ J_1$	$F_7\ G_6\ I_3\ J_2$	$F_8\ H_5\ I_4\ K_1$
1958-1959	$G_7\ H_6\ J_3\ K_2$	$G_8\ I_5\ J_4\ L_1$	$H_7\ I_6\ K_3\ L_2$
1959-1960	$H_8\ J_5\ K_4\ M_1$	$I_7\ J_6\ L_3\ M_2$	$I_8\ K_5\ L_4\ N_1$
1960-1961	$J_7\ K_6\ M_3\ N_2$	$J_8\ L_5\ M_4\ O_1$	$K_7\ L_6\ N_3\ O_2$
1961-1962	$K_8\ M_5\ N_4\ P_1$	$L_7\ M_6\ O_3\ P_2$	$L_8\ N_5\ O_4\ Q_1$
1962-1963	$M_7\ N_6\ P_3\ Q_2$	$M_8\ O_5\ P_4\ R_1$	$N_7\ O_6\ Q_3\ R_2$

TABLE II-A
CLASSES NOT IN SCHOOL
TRIMESTER ORGANIZATION

	Summer Trimester	Fall Trimester	Spring Trimester
1951-1952	$X_2\ Y_4\ Z_6$		A_2
1952-1953	$Y_6\ X_4$	B_2	A_4
1953-1954	C_2	B_4	$A_6\ D_2$
1954-1955	C_4	$B_6\ E_2$	D_4
1955-1956	$C_6\ F_2$	E_4	$D_6\ G_2$
1956-1957	F_4	$E_6\ H_2$	G_4
1957-1958	$F_6\ I_2$	H_4	$G_6\ J_2$
1958-1959	I_4	$H_6\ K_2$	J_4
1959-1960	$I_6\ L_2$	K_4	$J_6\ M_2$
1960-1961	L_4	$K_6\ N_2$	M_4
1961-1962	$L_6\ O_2$	N_4	$M_6\ P_2$
1962-1963	O_4	$N_6\ Q_2$	P_4

After the period of transition both faculty and students, however, could be on vacation one quarter or one trimester per year.

The plan has the further advantage of making an entire class of students available each quarter or semester for service in affiliated hospitals or other elected or assigned responsibilities.

Perhaps the greatest advantage of the plan is that it would increase the number of graduates from the existent medical schools by one class every three years, which would mean a thirty-three per cent increase for schools on the quarter plan and a fifty per cent increase for schools operating on the semester plan.

This plan is offered in the hope that our medical schools will be able to increase the number of graduates with full utilization of their present facilities and without disadvantage to individual students or instructors.

Comment by O. W. Hyman, Vice President, University of Tennessee

The change proposed by Mr. Thompson is indeed an ingenious method of increasing the number of medical graduates and of utilizing fully the heavy investment in physical plant, equipment and personnel—such as administrative, clerical, technical and maintenance personnel—which constitute a very heavy investment in every medical college.

It seems to me that the program adopted by the University of Tennessee in 1930 and in operation for the past twenty-one years makes even better use of the investments in the College of Medicine and gives an even flow of students through all of the services that is somewhat better than that proposed in Mr. Thompson's plan.

I believe that Mr. Thompson's proposal to make a much more productive use of the facilities of the college of medicine should receive thoughtful consideration and a trial at the hands of some of the medical colleges.

[Editor's Note: At Tennessee, all courses in the curriculum are offered each quarter. This enables the medical school to admit students each quarter. It also enables students to proceed at their own rate, taking vacations when they need and want them. Students, according to this plan, are enrolled in smaller groups at more frequent intervals and may withdraw at the close of a quarter without losing credit for work already completed satisfactorily.]

Comment by Harold S. Diehl, Dean, University of Minnesota Medical School

The schedule proposed by Mr. Thompson provides for the training of additional physicians by the more intensive use of available facilities. This is what is needed to help to meet the increased need for physicians occasioned by national mobilization.

A problem which this schedule poses for medical schools which offer instruction in the basic medical sciences to students enrolled in other colleges of the university is that the year-by-year changes in the schedule of medical classes would upset the programs of other groups which must use the same classrooms and laboratories. Of course, any program which admits students every nine months would present the same problem. These difficulties, however, are not insurmountable and would not affect medical schools which teach medical students exclusively.

Another problem is that any program of expansion or acceleration will require additional financial support. Where such support will come from at the present time is not apparent.

There is also the problem of providing an adequate teaching staff. However, if needed funds are made available and a sound deferment policy is continued, it should be possible to obtain the necessary teaching staff. One of the worst features of the accelerated programs of World War II was the depletion, and in some medical schools, the very serious depletion, of the instructional staffs which were called upon to carry out these programs. In the present emergency, staff depletions have so far been avoided, and they need not again occur.

Finally, it should be noted that while the above plan does offer a method of increasing the output of medical schools while avoiding many of the objections to acceleration, it does not provide any additional physicians for five years. An accelerated program, on the other hand, would produce an additional class of graduates each three years.

Undergraduate Education in Neurology*

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The subject of education in neurology has been discussed before this body in the past.[1] The simple fact that it is brought to you once more reflects, I believe, that the teaching in this discipline is attracting much interest by those who work in the field, and also that studies show the necessity of further evaluation and improvement of teaching facilities and methods.

As an introduction, I should like to stress the importance of neurology in the medical curriculum and in the training of the medical student and practitioner. Neurology is a fundamental subject dealing with the structure, functions and pathology of the most highly organized system of the human body, the nervous system; it is the sum of knowledge regarding the nervous system in both health and disease.[2] It is an integral part of general medicine. Approximately 12 per cent of all patients admitted to general hospitals have lesions involving the nervous system, not necessarily irreversible or fatal, and 14 per cent of all individuals in the United States who die each year have some structural nervous disorder.[3] The nervous system is the integrator and controller of all bodily functions, and, consequently, a study of neurology is necessary to the understanding of disease in general.

The problems of the diagnosis and treatment of diseases of the nervous system are often considered difficult ones by the physician who does not specialize in clinical neurology. Most parts of the nervous system are inaccessible to direct examination, and its intricate organization and integrated functions are difficult to comprehend on superficial observation. As a consequence, many practitioners are of the opinion that all neurologic matters belong to the realm of the specialist, and they make little attempt to diagnose or to treat them. This impression is far from correct, however, for many disorders of the nervous system come within the every day experience of most practitioners. Furthermore, many systemic diseases may show evidences of nervous dysfunction as their first manifestations. Medical diagnosis cannot be made without some knowledge of neurologic diagnosis. There are certain rare conditions and diagnostic problems, it is true, that require long experience in the field of diseases of the nervous system for adequate appraisal, but the majority of the more common neurologic entities can be diagnosed and treated by the physician in general practice. The necessity for a thorough background in neurology to the specialist in internal medicine, psychiatry and neurosurgery is obvious. An adequate knowledge of neurologic structure and function is also of paramount importance to the orthopedist, ophthalmologist, otolaryngologist, and pediatrician, if not to the specialist in each of the fields of medicine and surgery.

*Read at the Sixty-first Annual meeting of the Association of American Medical Colleges held in Lake Placid, New York, October 23-25, 1950.

Neurology is not a new specialty in the medical firmament. Its history can be traced back to Hippocrates and Celsus and others. Modern clinical neurology, however, developed in the latter half of the nineteenth century under Romberg, Erb, Westphal, Oppenheim and others in Germany; Duchenne de Boulogne, Cruveilhier, Vulpian, Dejerine, Charcot, Marie, and Babinski in France; and Jackson, Gowers, Horsley, Head, Holmes, Wilson, Sherrington and others in England.

There was a simultaneous development of the specialty in this country immediately following the Civil War,[4] under Hammond and S. Weir Mitchell, to be followed by Mills, Sachs, Dana, Taylor, Spiller and many others. As has recently been outlined so completely by Dr. Pearce Bailey, the neurologists of the earliest period in this country remained more or less anchored to internal medicine, for they were all products of the medical ward.[5] In the last two decades in the last century, however, as neurology was developing in scope and talent, there was some gravitation from its original attachment to internal medicine more in the direction of psychiatry. This advance in the psychiatric practice largely took the form of a critical attack on the institutional psychiatrists for the latters' alledged isolationism, lack of research and hospital abuses, and at that time it was said for a psychiatrist to be respectful he almost had to be a neurologist. During the subsequent two decades, the scope of neurology was enlarged by discoveries and new avenues of investigation, but it still lacked in overall leadership, and the neurologist remained primarily a diagnostician, showing little interest in total care of the patient. Psychiatry, on the other hand, developed more rapidly during that era, and in the years between the two World Wars, neurology and psychiatry, in many places, became combined into a joint specialty. In other schools, however, with the development of neurosurgery and the more articulate personality of the neurosurgeon, it became closely affiliated with the latter specialty.

There has been a renaissance in neurology as a specialty since the recent World War, and an interest on the part of younger men in the field has stimulated its development. Statistics brought out by the Veterans Administration and other agencies have shown that there is a great need for neurologists in the diagnosis and treatment of diseases of the nervous system,[6] and furthermore a great need for the general practitioner and for the specialist in other fields of medicine to understand the structure, functions and pathology of the nervous system. The importance of neurology as a field of medical practice may be reflected if one recalls that the Nobel Prize for medicine for 1949 has just been awarded to two neurologists, Dr. Egas Moniz of Portugal, who developed angiography and frontal lobotomy, and Dr. Walter Hess of Switzerland, who is known for his work on cerebral localization. In previous Nobel Awards, the names of Cajal, Golgi, Wagner-Jauregg, Dale, Adrian, Sherrington, Gasser, Erlanger and others in the field of neurology have been honored significantly. Recent studies have shown evidence of increasing interest in neurology as a specialty, of steady growth in both number and

geographical distribution of approved hospitals for residency in neurology, and of a great present demand for qualified neurologists.[7]

The American Academy of Neurology, a relatively new organization which has been organized mainly by some of the younger men in the specialty, has been investigating the subject of neurologic education, both graduate and undergraduate, by means of questionaires sent to the departmental or divisional chairmen of instruction in neurology in the various medical schools throughout this country, and also by means of two meetings or symposiums attended by these chairmen from approximately one-fourth of the approved schools. The subject has been discussed and reviewed comprehensively. The questionaires have not been so very helpful. They have showed, mainly, a wide variation throughout the country and marked individual differencies in departmental autonomy, curriculum hours, size of staff, clinical facilities and research activities. They illustrate, as Dr. Pollock has said, that there is no uniformity of the philosophy of teaching neurology.[8] The replies, as well as those of Viets in 1937,[9] Bailey in 1946,[10] Riley in 1947,[11] and Pollock in 1949,[12] have, however, given us some information on which to base our discussions and on which to present certain conclusions and recommendations which were brought out at the most recent meeting in Chicago on September 17. I would like to discuss the following points somewhat individually.

The problem of departmental autonomy is one that varies widely. Of the seventy-two accredited four year medical schools in this country, sixteen have an autonomous department, in twenty-eight neurology is combined with psychiatry, in eleven it is taught in the department of medicine, in four it is combined with neurosurgery, in four others, neuropsychiatry, as such, is a division of medicine, and in nine the status is uncertain. Even these figures are not too reliable, however, because in some of the schools where neurology is in the department of medicine or where it is part of a combined department of neurology and psychiatry, it has a special divisional chairman, whereas in others is does not. In some of the combined departments the chairman is a neurologist with his specialty as his major interest (Dr. Pollock at Northwestern; Dr. Ross at Indiana; Drs. Reese and Masten at Wisconsin), whereas in most schools with a combined department, the major interest is in the teaching of psychiatry, and neurology is just a neglected stepdaughter. In some schools where it is combined with medicine, as at Cornell under Dr. Wolff, excellent teaching and research in neurology is carried on. In other schools, however, neurologic education is not stressed. It is of interest, however, that in the older and larger schools and in those where more important work in neurology has been done (Harvard, Columbia, Pennsylvania, Jefferson, Cincinnati, etc.) it has departmental status. Excellent work is also done at Washington University and at Minnesota where it is combined with psychiatry, but has divisional status with its own chairman. I realize only too well that the general setup, if one may use such a term, in every school varies, and one cannot make any general statements about what is best and what is not best.[13] It was the conclusion of our meeting and our committee, how-

ever, that for the most adequate teaching of neurology to undergraduate and graduate students of medicine, the specialty should have an autonomous position in the medical curriculum, under a chairman whose primary interest centers in his special field.

The variability in teaching hours in neurology in the medical schools of this country is almost beyond belief. Our survey has shown that the curriculum hours for the freshman year may vary from zero to 150 hours, for the sophomore year from zero to 100 hours, for the junior year from eight to 192 hours, and for the senior year from five to 147 hours. In those those schools in which a large number of hours was reported for the freshman year, neuroanatomy and neurophysiology are probably taught within the department of neurology. Our committee realizes that it is not always feasible to teach the preclinical subjects related to neurology by the clinician, but it is our strong conviction that there should be close correlation between the neuroanatomist and neurophysiologist and the specialist in clinical neurology. It is our belief that for the best training of the medical student, neuroanatomy and neurophysiology should be taught by a clinician who has had experience with the problems presented by patients suffering from diseases of the nervous system.[11] If the curriculum is arranged, however, so that this cannot be done, there should be a close affiliation between the clinician and the preclinical man. There should be frequent clinical demonstrations to illustrate the practical aspects of the anatomy and physiology that the student is given, and correlative courses should be offered by the clinician and the anatomist together. Neuropathology should be taught by a neurologist in close correlation with general pathology. All of the basic sciences (neuroanatomy, neurophysiology, neuropathology, electrophysiology) should be presented to the student in such a manner that he understands the clinical application of each. They should be correlated properly with clinical neurology. There should not be too great a chronological interval between the time of his instruction in the basic sciences and that in clinical neurology. The basic sciences should be presented in an attractive manner so that they will not stimulate the development of fear and rejection on the part of the medical student. The goal at all times should, of course, be instruction for the future general practitioner.

It is felt that a minimum of twenty-two semester hours in either the sophomore year or the first part of the junior year should be devoted to the neurologic examination and neurologic diagnosis. Here there may be further correlation between anatomy and physioiogy and clinical neurology. The student should be taught the underlying anatomic and physiologic bases for the various tests carried out in the neurologic examination, and he should be taught both the findings in the normal individual and the changes that may take place in disease.

The mode of teaching and recommended teaching hours for the junior and senior years is dependent somewhat on the clinical material available and the size of the staff. Bedside teaching and practical experience, both in the

ward and in the dispensary, are the desirable objectives, but there are some schools which lack an adequate amount of good teaching material, and in these the instruction must be augmented by didactic work, The greater the clinical facilities and opportunities for clinical clerkship and dispensary services, the fewer the hours needed for didactic work. Regardless of the clinical material, however, a certain amount of didactic work is necessary. A minimum of fifty-five hours of didactic work is advised. These may be used for lectures, demonstrations, or clinics. In these didactic hours the student should be taught the more common neurologic disorders and their treatment, and the less frequently encountered conditions which should receive less emphasis, but sufficient for their recognition. Not only should the teacher, however, dwell on those conditions which are considered essentially neurologic, but he should correlate disease of the nervous system to systemic disease in general, and emphasize the important relationship between neurologic complications and systemic disease as found in such entities as arteriosclerosis, hypertension, infections, neoplasms, metabolic disorders, endocrinopathies, etc. A clinical clerkship should be available so that the student in either his junior or senior year can spend at least twenty half days on the neurologic wards, and no less than thirty hours in the outpatient department in his senior year. These are considered minimum standards.

Hospital beds and dispensary facilities should be available to give the juniors and seniors individual work in the diagnosis and treatment and the follow-up of patients with neurologic disease and with nervous system complications of systemic disease. It is best if the neurologic beds are segregated in a separate ward, wing, or pavillion for the convenience of both the student and the teacher, but adequate instruction can be carried out if this segregation is not available. It is difficult to make any recommendation about the size of the staff, inasmuch as there is a great variability between part time and full time clinicians in medical schools and between salaried and volunteer instructors. Furthermore, the size of the staff varies with the size of the school, the capacity of the teaching hospital, the registration in the outpatient clinic, the character of the school and hospital, and whatever research program is going on. For most satisfactory teaching, however, the department should be under a full time professor, or his equal, who should have, if possible, two permanent assistants.

Some of the above recommendations are minimum ones; some are desirable ones. It is certainly true that with the marked variability in medical school organization throughout the country, the discrepancies between privately owned and State owned schools, between schools in small cities and those in metropolitan areas, between schools with their own hospitals and those which must rely on other hospitals in their vicinities, it is extremely difficult to say how neurology should be taught, and no one can recommend the needs for all schools. I think that I could be more helpful if I attempted to get away from statistics and made the following recommendations for undergraduate teaching in neurology:

1.—The basic sciences (neuroanatomy, neurophysiology, neuropathology, electrophysiology) should be presented in such a manner that the student understands the clinical application of each; they should be properly correlated to clinical neurology; there should not be too great a chronological interval between the time of his instruction in the basic sciences and that in clinical neurology.

2.—Medical students should be taught how to carry out a satisfactory and complete neurologic examination in such a manner that they will automatically integrate the neurologic with the general physical examination.

3.—Medical students should appreciate the fact that the nervous system is a part of the body and, therefore, subject to involvement by the same disease processes that cause pathologic changes elsewhere in the body.

4.—Medical students should be taught the more common neurologic disorders and their treatment; they should also realize the importance of neurologic complications and manifestations in systemic disease.

5.—Neurology should be presented to the student in such a manner that some students in every class will desire to continue with its study.

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DISCUSSION

DR. ROLAND P. MACKAY, University of Illinois College of Medicine. Many of the suggestions made by Dr. DeJong for the improvement of neurologic education will not encounter opposition, but the matter of autonomy for departments of neurology may be questioned by some, and merits further discussion.

There are strictly scientific reasons for such autonomy. The field of neurology is an enormous one, and requires the undivided attention of an independent department for both teaching and research. Neurology includes, not merely many mysterious and baffling diseases, such as multiple sclerosis, syringomyelia, the various encephalitides, the dystrophies, amyotrophic lateral sclerosis, etc., etc., but the whole fantastically complex matter of the integration of diverse functions of the body, and the reactions of the organism to its environment. Neurology extends over a vast spectrum, from the functions of the frontal lobes with their tremendous implications for the personality of the individual, to the chemistry of the neuromuscular endplate and the physics of muscular contraction.

Internists seldom have much time for such things, and often but little sympathy. Psychiatrists are too frequently lost in contemplation of a disembodied soul, and are often, to use the vernacular, "away out in the left field." The neurosurgeons are largely afflicted with a form of "gunbarrel vision" which permits them to see only surgical problems. This

attitude has been succinctly phrased by George Hassin, who quoted a neurosurgeon as saying "No block; no choke; send him home!" The neurologist needs his own, autonomous department to permit effective teaching of students, fruitful research in a challenging field, and the attraction of enthusiastic students.

But aside from these scientific aspects, there are cogent administrative reasons for autonomy. At present, there is too often a marriage of convenience between neurology and medicine, or neurology and psychiatry or neurology and neurosurgery. (I will not say there is no love in such a marriage but it is nevertheless a union of convenience.) Now, for neurology to marry medicine is to marry one's mother; for neurology to marry psychiatry is to marry one's sister; for neurology to marry neurosurgery is to marry one's daughter. Aside from the suggestion of incest implicit in such arrangements, these marriages leave the question of authority undecided. For in every marriage one of the two must hold the steering wheel and the other must be merely a back seat driver. It is not to the interest of neurology, nor of medicine at large, that such intra-family struggles should occur. Neurology is the great field of the future, as yet only superficially ploughed, where most needs to be done and where most is promised. In the words of Winston Churchill, "Give us the tools, and we will not fail."

DR. PEARCE BAILEY, Chief Neurologist, Veterans Administration.—Dr. DeJong has recommended departmental autonomy for neurology to improve undergraduate teaching in this field. He suggested that such a department have a chairman whose prime interest lies in the study of the nervous system. Dr. Mackay has clearly delineated the advantages of such an arrangement. In a consideration of this matter, the question arises as to whether the identity of neurology as a specialty is clearly enough defined and has enough competent manpower to justify such an autonomy on a large geographic scale. In view of new trends in neurology, I believe the answer to this question is in the affirmative, or at least will be in the near future.

It is true that following World War I the prestige of clinical neurology in the United States began to decline. It lacked leadership; it lacked organization; it lacked a therapeutic approach. Many clinical neurologists, in a scramble to control psychiatric practice, lost sight of their basic orientation and of the therapeutic consequences of neurologic patients. As a result, many of these neurologists began to lose contact, not only with laboratory, but also with patients whom they had been trained to treat. Their identity became further obscured by parading under the literally meaningless but figuratively ubiquitous term of "neuropsychiatry."

Since World War II, however, there has been a definite reversal in trend. Neurology began to reorganize along more dynamic and therapeutic lines. Let us see what happened in the Veterans Administration. About 35 per cent of the psychiatric and neurologic census in general hospitals turned out to be neurologic cases. Less than 6 per cent of these could benefit from any known surgical procedures. These veterans are entitled, by law to competent diagnoses and care. As a consequence, the Veterans Administration has developed fourteen neurologic centers, twelve approved residency programs with fifty residents in straight neurology, three national centers for aphasic patients, two national centers for epileptic patients, several centers for the rehabilitation of disabled neurologic patients, national training programs in electroencephalography and neuropathology, and many research projects in neurology. In 1948, the Veterans Administration Neuropsychiatric Division changed its name to the Division of Psychiatry and Neurology. Shortly thereafter the Medical Department of the Army followed suit.

Dr. DeJong has outlined the similar type of reorganization in civilian medicine, the purpose of the American Academy of Neurology, and the increased activity in medical schools. Another example of the new trend is the recent establishment of a Department of Neurology, under a full time Chairman, at the Georgetown University School of Medicine.

Additional evidence of the sincerity of this reorganization was indicated by the large attendance in 1949 at the Fourth International Neurological Congress in Paris. At this Congress a resolution, introduced by Monrad-Krohn of Oslo and passed by acclamation, was to the effect that neurology be organized throughout the world as an autonomous specialty within the field of medicine. An international committee was appointed to implement this resolution.

If these various new developments unite and grow, I believe that departmental autonomy for neurology in medical schools will be brought about as an orderly process of evolution rather than by decree.

Teaching of Diseases of the Chest in Medical Schools

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Until a few decades ago, diseases of the chest were generally understood to comprise mainly pulmonary tuberculosis, the pneumonias and their complications. This now obsolete conception and its influence on the teaching of diseases of the chest was brought home by Dr. Charles A. Doan, Dean of the Ohio State University College of Medicine, speaking before the Association of American Medical Colleges at Colorado Springs, in November, 1949.[1] Limited diagnostic facilities, as well as a lack of initiative to explore further the field were responsible for the old approach. As recently recalled by Singer,[2] long time associate of Dr. Evarts Graham, there was little that could be done for most of the other chest conditions,—when and if they were diagnosed correctly.

As a result of increased diagnostic and therapeutic efficiency during recent years, the scope of diseases of the chest has been widened markedly and now includes more than seventy-five diseases and pathologic states. A number of these conditions, such as asthma, bronchiectasis, nonspecific infections of the respiratory tract, the pneumonias, cancer and pulmonary tuberculosis at present have a major significance in medical practice. Moreover, much can now be done to prevent, alleviate, and cure many of these ailments.

While cancer of the lungs continues to assume greater and greater proportions, today it is recognized as being curable in its early stages. Pulmonary tuberculosis, now recognized as being both preventable and curable, still remains a very important, if not the most important, medical, public health and economic problem.

The expansion of the field of chest diseases has been accompanied by a tendency to give less emphasis to tuberculosis. This trend is the result of the assumption that pulmonary tuberculosis no longer requires serious consideration and that, therefore, attention can be directed to other problems. This attitude is not only unjustified but dangerous and would seriously jeopardize the present tuberculosis control program. In 1949, Hinshaw,[4] head of the Department of Diseases of the Chest at Stanford University Medical School, in his address as President of the American Trudeau Society, speaking of the control of pulmonary tuberculosis in the United States said:

"If listed according to degree of preventability, we could be more alarmed by our present tuberculosis death rate. Or, if tuberculosis were listed according to age groups affected or according to years of potential life lost, or according to actual cost in dollars, or according to sorrow, hardship, frustration and degradation caused,—then we could be less complacent, and our efforts to control the disease would be intensified."

According to Dr. Hinshaw, pulmonary tuberculosis in this country remains

"the most important chronic fatal disease to be caused by a germ, the most important infectious disease, the most important of all diseases of young people, the most important of the truly preventable diseases."

One of the primary projects of the American College of Chest Physicians was assistance to medical schools for the teaching of diseases of the chest. This plan was adopted for two main reasons: first, because of the wider scope of chest diseases and the resulting greater significance of the subject in medical practice and teaching; secondly, because it is now recognized that the control of pulmonary tuberculosis, which is still the most important of all chest diseases, depends mainly on education, in particular of the public at large.

For practical purposes it is the responsibility of the general practitioner or family physician to educate the public in the principles of tuberculosis control. He sees the patient first, has the confidence of patient and family, and his advice and guidance will be followed. In order to be in a position to launch the patient who may have pulmonary tuberculosis on a course that will safeguard his life as well as the lives of those to whom he might become a source of infection, the general practitioner must have a practical working knowledge of the subject. His interest must have been aroused, and he should have an understanding of the basic factors of diagnosis, treatment and prevention of the disease. Unless this is achieved during the undergraduate years, he will have very little opportunity to acquire such a working knowledge after graduation. Only a few hospitals with internships have a service that includes diseases of the chest, and even where this is the case, instruction often affords very little, if anything, of practical value, and if he has not been impressed with the importance of pulmonary tuberculosis during student days, the physician with so many other demands on his time and attention, will not go to meetings or read literature pertaining to chest diseases.

The Council on Undergraduate Education of the American College of Chest Physicians realizes that medical schools strive to teach each subject in direct proportion to its importance relative to other subjects in the medical curriculum. With the constantly changing requirements of medical practice and teaching it has become an arduous task to establish and operate a balanced teaching program. It is not the intention to suggest here that more time be set aside for the teaching of chest diseases, especially as a recent study revealed that with relatively few exceptions sufficient time is already being provided. The question is whether the methods used are adequate for proper training of students in the field of chest diseases within the limits of this allotted time.

Fourteen years ago this Council started its activities by sending out a questionnaire to all medical schools, asking for information about the methods by which diseases of the chest were being taught. In the returns the lack of uniformity of teaching methods was apparent, and in some of them a desire

for help from organizations especially concerned with diseases of the chest was expressed.

Accordingly a schedule or outline for teaching diseases of the chest was formulated, intended to serve as a guide, and flexible enough to be adapted to various local conditions.[5] This schedule was submitted to the membership of the College for approval at the meeting in New York City, in 1940. By invitation, it was presented to the Association of American Medical Colleges in Richmond, Virginia, in October, 1943. A number of medical schools and individual members of medical faculties showed interest in the schedule and it was felt that the methods by which diseases of the chest are now being taught in many schools have been definitely improved as a result of these suggestions.[6]

In the meantime, the extent and importance of diseases of the chest have so markedly increased that the Council believes that the original schedule for teaching this subject should be revised or that a new schedule should be drawn up. During the past year, therefore, another questionnaire asking for information about the present method of teaching diseases of the chest was sent to the medical schools in this country. The response was generous and furnished a composite picture of the methods presently employed.

During the year 1949, the National Tuberculosis Association arranged and sponsored two meetings of representatives of that Association and of the American Trudeau Society, the American Association for Thoracic Surgery, and the American College of Chest Physicians. The purpose of these meetings was to devise means by which these organizations might combine their efforts to establish a teaching program to make medical students lung conscious and develop an understanding of the physician's reponsibilities in this field. At both meetings, it was agreed that a definite need exists for improving teaching methods, and, furthermore, that foremost consideration should still be given to pulmonary tuberculosis. A number of medical deans and professors of medicine were invited and were present in an advisory capacity at the second meeting held in New York City, in April, 1949.

At this meeting it was decided to invite someone to address the Association of American Medical Colleges at its next annual meeting to be held in Colorado Springs, on the subject of teaching diseases of the chest. It was especially intended to present an overall picture of the practical relation of medical schools to the subject of diseases of the chest. Dr. Charles A. Doan, of Columbus, Ohio, who had attended the New York meeting, and had reported on a teaching center established at Ohio State University College of Medicine, of which he is dean, was chosen to deliver this address. He outlined the aims and responsibilities of medical schools and specifically described a large general hospital that had been built at Ohio University to serve as a teaching center. In this hospital 300 beds are to be set aside for patients with diseases of the chest, with special emphasis on pulmonary tuberculosis. In discussing Dr. Doan's talk Dr. James E. Perkins, Executive

Secretary of the National Tuberculosis Association, summarized the general opinion, particularly as to pulmonary tuberculosis:

"The battle is far from over, and it will be prolonged if medical students who are about to become practitioners are not continuously informed in their undergraduate courses of the importance of tuberculosis, and adequately trained in its early diagnosis and proper treatment. The battle will be protracted further unless an adequate number of physicians take special postgraduate training in tuberculosis and other chest diseases so as to serve as skilled teachers of medical students, to staff the facilities for the treatment of the tuberculous, and to serve as tuberculosis control officers. There should be no fear at present nor for some time to come that tuberculosis is so near eradication that the need for such specialized skill will disappear before the end of the lifetime of one acquiring this training."

From the opinions expressed at these meetings, it is apparent that in most schools the medical deans, heads of medical departments and professors of medicine responsible for the arrangement of medical curricula continue to hold the view that pulmonary tuberculosis can be adequately taught as an integral part of internal medicine. Those working in the field of chest diseases, on the other hand, who have been in a position to witness the almost total failure of past efforts to teach the subject as an integral part of internal medicine believe that diseases of the chest should be taught as a separate course, or if treated as a component of the course in internal medicine the subject should receive distinct and independent consideration, in the arrangement of the teaching material as well as in the selection of teachers.

The shortcomings encountered in attempting to teach pulmonary tuberculosis as a constituent part of internal medicine were clearly pointed out by Dr. John Barnwell, head of the Tuberculosis Division of the Veteran's Administration, Washington, D.C., speaking at the New York meeting and quoted by Dr. Doan:[1]

"Very few university hospitals have any kind of facility whatever for teaching tuberculosis. Three or four beds may be devoted to thoracic surgery, and that is the story. It is one thing to tell a student that it is a part of internal medicine and then to find an enormous hospital without a recognized case of tuberculosis in it. Since I have been in the Veteran's Administration, there have been three instances of a teaching center refusing to accept a tuberculosis hospital which would be within easy reach of its medical school. As a part of the Veteran's Administration there are 22 tuberculosis services which might be used for the teaching of undergraduate students."

The following statements received in response to a recent questionnaire illustrate the situation as it exists at present in many schools.

"A check on the teaching of diseases of the chest at the two medical schools in this city will reveal a definite shortage of clinical material, since discontinuance of an active tuberculosis ward at the County Hospital in this city, in 1946. The chest clinic out-patient department at each school affords little active material for physical examination; there is no treatment here. Diseases of the chest are taught as a part of general medicine by voluntary lectures. Time is available for only a few lectures. Assignments are in textbooks of general medicine and physical diagnosis. Both teaching hospitals prefer not to admit tuberculosis patients. This is rather a discouraging report."

From another part of the country:

"On questioning the senior medical students in our closing lecture a few weeks ago, they informed me that they had seen only a few isolated cases of pulmonary tuberculosis and at no time had received any bedside clinical instruction in tuberculosis."

The Council on Undergraduate Education of the American College of Chest Physicians believes that due emphasis on pulmonary tuberculosis in a

teaching program depends on three factors: in the first place, sufficient teaching material must be available; second, the teaching material must be presented in such a manner that the students will be able to acquire a practical working knowledge of this disease of the chest; third, instruction must be given by men who not only possess an inherent ability to teach, but who are also qualified through training and experience in this particular clinical field.

More specifically, it is imperative that sufficient teaching material be available. Only when students have an opportunity to study and observe patients with pulmonary tuberculosis will they be able to gain a lasting impression of the various phases of the disease.

Efficient training should, furthermore, aim at conveying to the medical student a clear understanding of the technique and importance of the early diagnosis of pulmonary tuberculosis, of the technique and importance of isolation of patients after the diagnosis has been made, as well as of the basic principles of treatment. To this end, instruction will have to use material presented in an orderly manner, otherwise confusion is certain to arise in the student's mind.

One of the principal arguments advanced by those who believe the subject of diseases of the chest should be taught as an integral part of internal medicine is that tuberculosis patients should neither be isolated nor distinctly grouped. The term "distinct grouping" primarily implies segregation of patients to the extent that they live in an atmosphere of their own. Their care and guidance, furthermore, should be in the hands of men qualified through long experience in the field and not entrusted to others without special training, or to learners here today and gone tomorrow.

The aversion against segregation of patients with tuberculosis is based on the erroneous idea that it constitutes a stigma resented by the patient and his family alike. This may very well be true of those outmoded institutions for housing tuberculosis patients which have no justifiable present-day existence and have been rightly compared by Dr. Karl Klassen[7] to isolation hospitals or pest houses. A negative attitude on the part of the patient can be avoided or overcome if the physician takes time to talk to the patient and his family before the cure is begun. He should explain the nature of tuberculosis, discuss especially the patient's own case and point out the essential prerequisites of successful treatment, stressing the importance of placing the patient in an environment and atmosphere designed to promote his physical and mental rehabilitation. With this initial approach and rational guidance the reaction of the patient and that of his family is one of appreciation and gratitude.

It has also been contended that isolation, or grouping of patients with pulmonary tuberculosis, will deprive them of special medical and surgical services. But this need no longer be the case as it is now recognized that climate is not an important factor in the care of these patients. Furthermore, other special services, though essential at times, are required only occasionally. Treatment of pulmonary tuberculosis, on the other hand, without isolation or

at least grouping of the patients is bound to result in failure. The threat to the patient's life,—and it is always a very real threat,—is his tuberculosis. All possible advantages of other services will go for naught unless the most favorable conditions are created for overcoming the primary disease.

A further objection advanced against isolation or grouping of patients with pulmonary tuberculosis is that this method of caring for these patients is an inconvenience or a handicap to medical students and teachers in their endeavor to integrate information obtained in the study of patients with pulmonary tuberculosis with that gained from patients with other diseases. But such an argument goes contrary to the Hippocratic principles and under no conditions should the patient's welfare be sacrificed for the accommodation of medical attendants or for the more convenient locating of teaching material. This is a basic tenet of medical practice which must be handed on to medical students if the profession is to merit and maintain the confidence of the public and if the advent of socialized medicine is to be averted.

The treatment of pulmonary tuberculosis is a way of life requiring the right environment and not to be achieved in the medical wards of a general hospital. Through attention to detail in their way of life, patients with pulmonary tuberculosis are enabled to overcome their disease, while lack of such attention causes them to die.

The third, but by no means the least important point in a program for the teaching of diseases of the chest is the selection of teachers. Time and experience have demonstrated that only those with a lively interest and extensive experience in this field are qualified to give specialized instruction. In the words of Dr. Doan: "He should not be a physician forced into or drafted for the teaching of this subject as a reluctant alternative to the further pursuit of a primary interest in another major field." In order to stimulate attention and inspire his students, the teacher must himself possess these qualities which come only with experience and understanding. It is this example of the teacher which will be reflected in the attitude of the future physician.

The establishment of a special chest teaching center at Ohio State University College of Medicine, as described by Dr. Doan, is ideal in theory. However, it would appear that as yet provision has been made for only one of the three essential factors upon which successful instruction in pulmonary tuberculosis depends. The ultimate outcome of the program hinges upon whether or not the other essential factors are sufficiently taken into consideration. This means proper arrangement of the teaching material in its presentation to the students, and selection of teachers who through training, experience and natural ability are able to instruct in diseases of the chest. This point was clearly emphasized in a recent comment by Dr. Karl Klassen,[7] of the Ohio State University College of Medicine:

"The organization of this center for the study of chest diseases presents a definite challenge to both the state health officials and to the medical school. This center can contribute greatly toward the eradication of pulmonary tuberculosis in this state only when those

entrusted with the administration of this center consider the fundamental reason for the establishment of this hospital. Unless this hospital is staffed with a well qualified faculty, whose main purpose will be the modern treatment of chest diseases, the teaching of the various aspects of this subject on both the graduate and undergraduate level and the conduct of an active program of fundamental research, such an institution will revert to the status of an outmoded sanatorium or pesthouse."

At present, teaching material is available at a number of medical schools; but because these schools fail to bring into play the other two fundamental factors essential for effective instruction in tuberculosis, their graduates are sent out into the world entirely unprepared for this specialized work.

Only by careful analysis of teaching programs and evaluation of all factors involved will the subject of pulmonary tuberculosis be presented on a level commensurate with its importance as a public health and medical problem. The actual decisions to this end are up to those in charge of arrangement and carrying out of medical curricula. By evaluating existing facilities and suggesting improved teaching methods the Council on Undergraduate Education hopes to be of assistance in the effort to adequately present the subject of diseases of the chest to medical students.

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Further Report on the Preceptor System in Medical Education

With Some Notes on a New Program for Resident Training for General Practice*

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The modern medical school thoroughly indoctrinates its students in the principles of the preclinical sciences, medicine, surgery, pediatrics, obstetrics and gynecology, and all clinical branches. Little, if any, place in the curriculum is reserved for the consideration of the concept and realities of general practice. Although many medical students express their interest in becoming acquainted with the professional, social and economic aspects of general practice, they are rarely given this opportunity.

In the evolution of medical knowledge and practice, specialization has grown apace, until now the faculties of medical schools are composed almost entirely of highly skilled specialists. These teachers cannot comprehend the problems of general practice because they know nothing of it at first hand. In this atmosphere, it is only natural that specialization in a more and more limited field becomes the highest goal of achievement for the medical student. General practice remains a nebulous area of practice personified by the radio and film version of Jean Hersholt's "Doctor Christian." It becomes the branch of medicine relegated to the unfortunate applicant who does not receive the highly cherished speciality residencies. Furthermore, little effort is made by most medical schools to ensure carefully supervised formal postgraduate training for their graduates who wish to become general practitioners. These graduates are forced to acquire whatever experience they can in a wide variety of hospitals, which, all too frequently, do not have an organized plan of teaching. Some finish one or two years of a straight or rotating internship and plunge into the practice of medicine with much courage and little wisdom or training. To the layman they are doctors. The results occasionally are sad.

The problem is an obvious one. The people in great areas of the rural districts have inadequate medical care. Urban areas have their fair share of poorly trained general practitioners. The majority of medical graduates who chose to do general practice must depend on what experience they are able to obtain in hospitals or in association with established practitioners. Specialists continue to multiply far out of proportion to an honest demand. The

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lay public has become educated to the need of the glorified specialist for care which could be given them by a well trained general practitioner who knows if and when special attention is needed but who also knows his limitations. The greatest need is in rural areas, but the need is also great in urban centers. Some effort must be made by medical educators and the profession to supply well trained physicians for these areas.

On the other hand, rural communities must offer some inducement to attract well trained general practitioners. They must offer proper facilities for health services, such as well equipped small hospitals staffed with good nurses and adequate technical services in roentgenology and clinical pathology. Otherwise, why should an earnest, sincere, well trained young man wish to settle in a community where he will be able to offer his patients only a minute fraction of the great advances of modern medicine which are at his command. There are few, self sacrificing, capable crusaders left. Offer a man a good training, reasonable facilities with which to utilize his ability, a secure income and a congenial community which he respects and whose respect he can achieve; this is the formula for good rural medical care. The fault, at present, lies not only with the medical schools but also with the communities that cry for help without attempting to help themselves. Enlightened teamwork is imperative.

Several medical schools throughout the country have become cognizant of the urgency of this problem.[1] One of us (W. J. K.) began to champion the idea of introducing the medical student to the nature and realities of general practice in 1926.[2] It was at this time that the preceptor system was revived for medical students. Under this system, for nearly 25 years a number of interested senior medical students have four to six weeks associated with carefully selected able general practitioners in rural areas.

In such an environment students have learned what no highly trained specialist could ever teach them. This program has been hailed enthusiastically both by students and practitioners. The student has brought the newer concepts to the practitioner, who, in turn, has given the student an insight into the art of medicine and introduced him to the broad aspects of treating people as members of society.

The physicians participating in this program are able men who enjoy general practice and are happy to teach medical students the way of living and working which this branch of medicine affords.

If possible, the student lives in or close to the home of the physician preceptor. The student is with the physician when he sees patients in the office, in the home (day or night), and on hospital calls. He assists the physician in minor or major procedures. He is introduced to the public health and sociologic problems which a general practitioner must often solve. The student is introduced to the financial problems of the patient and the physician. He learns something of the organization and administration of a medical practice. He meets many people from whom he may learn—the pharmacist, the dentist, the city fathers, the public health officer,

the social service representatives. He attends civic club and county medical meetings as the guest of his preceptor. In this manner the student sees the practice of medicine in all its aspects at first hand. He is given the opportunity to crystallize his concept of general practice.

Also fathered, fostered, and fought for by one of us (W. J. K.), is another phase of medical education designed to offer a two-year formal resident training program for graduates interested in general practice.[3] These resident positions will be offered to those graduates who have completed an internship, preferably of the rotating type, in an accredited hospital. The San Mateo County Community Hospital is cooperating in instituting this progressive program and may well serve as a model in our region. Residents will be supervised by the hospital visiting staff with the assistance of the Academy of General Practitioners of San Mateo County. One of us (W. J. K.) is assisting in organizing the educational features of this program and will be aided by a number of interested physicians, general practitioners and public health workers. It is expected that a young physician interested in general practice will be secured to devote a major part of his time in coordinating the instruction of the resident staff.

The hospital will accept eight residents for the service commencing July 1, 1950. The services will include medicine, pediatrics, infectious diseases, surgery, emergency, orthopedics, obstetrics and gynecology in the wards and outpatient clinics. Also included will be one month in the Public Health Department, one month in x-ray and laboratory, and one month spent working with an outstanding general practitioner in office and home visiting service.

It is hoped that if our experiment is successful, other county hospitals, especially in rural areas, where visiting staffs are competent, will undertake the training of general practitioners in cooperation with other medical schools in our great state.

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Official AAMC Statement Presented to Senate Committee on Veterans Administration

I am Joseph C. Hinsey, Dean of the Medical School of Cornell University and Chairman of the Executive Council of the Association of American Medical Colleges. With me is Dr. R. Hugh Wood, Dean of the Medical School of Emory University and Chairman of the Association's Committee on Veterans Administration-Medical School Relationships.

The Executive Council of the Association of American Medical Colleges, meeting in Chicago on February 9-12, 1951, considered as one of its most pressing items of business the great concern for the welfare of the medical program felt by all of the medical schools affiliated with the Veterans Administration hospitals. This concern was thrown into sharp focus by the forced resignation of the Chief Medical Director, Dr. Paul R. Magnuson.

The Council heard reports from the Administrator of Veterans Affairs, General Carl A. Gray Jr., Dr. Magnuson, its Committee on Veterans Administration-Medical School Relationships, and a group of deans from fifty medical schools affiliated with the Veterans Administration.

Statement of the Council

After extensive exploration the Council authorizes the following statement:

1. The amazing improvement in medical care of veteran patients since 1946 is the result of the practice of affiliating medical schools with Veterans Administration hospitals. This plan, conceived by physicians, was inaugurated by Generals Omar N. Bradley and Paul R. Hawley and carried to fruition by Dr. Magnuson. The effect of this unprecedented collaborative effort in medicine by a federal agency and the universities was to bring the poor professional care of veterans to a level which equals the best in the nation. In spite of misgivings as to the possibility of making such a plan work, the medical schools threw themselves into the program in a spirit of service to the nation's disabled veterans.

Seriousness of the Situation

2. The long-standing differences between the Administrator and his Chief Medical Director, culminating in the "resignation" of Dr. Magnuson, has caused all medical schools participating in the Veterans Administration medical plan to be gravely concerned for the future welfare of the program. Twenty-five schools have written strong letters to the Association of American Medical Colleges voicing their feelings of concern. Representatives of fifty schools came to a special meeting in Chicago on Sunday, February 11, to consider the problem. They were unanimous in their conviction that the situation is serious and that immediate action is needed. Most Deans' Committees during the last two or three years have experienced increasing difficulty in getting their jobs done. The Association believes it would be disastrous for patients if the Administrator failed to take appropriate action before the morale of his hospital staffs deteriorates further. Deans reported that they already were holding the resignations of many full-time and attending physicians awaiting tangible assurance from the Administrator of Veterans Affairs.

3. In view of Dr. Magnuson's "resignation" as Chief Medical Director, the schools now declare their whole-hearted support of the efforts of the new appointee, Admiral Joel T. Boone. At the same time they are of the opinion that no Chief Medical Director can administer the medical services effectively unless there are basic changes in the present policies and practices of the Veterans Administration.

4. The Association of American Medical Colleges does not presume to state how the Veterans Administration should be organized, or who should hold key administrative positions. It records herewith its belief that the increasing difficulties experienced during the past two years threaten the continued existence of the present excellent medical program. It believes the signs pointing toward a breakdown in this medical program are clearly evident. It would be folly to wait until the plan collapses before taking remedial steps.

Difficulties Involved in Affiliation with VA

5. The Association of American Medical Colleges is interested in finding the causes of the difficulties experienced by the medical schools affiliated with the Veterans Administration hospitals. These causes should be examined in the light of the long background of experience which the medical schools have had with their teaching hospitals. The defects lie in the organization and administration of the Veterans Administration itself.

The Association does not agree with the implications of the statement of the Administrator in his letter to the deans dated January 23, 1951:

> "The differences of opinion between Dr. Magnuson and me, which led to his leaving, involves broad principles of administration and organization rather than medical policies, programs or practices."

Organization and administration of medical facilities cannot be separated from medical programs and practices. The location and construction of hospitals and everything that goes on in a hospital has an effect upon the care of patients. Beyond the primary need for an adequate and top-flight medical staff, such mundane things as the heating of the building, the cleaning of the floors, the provision of entertainment, the type of equipment, the availability, nature and quality of supplies, play a significant role in the welfare of the patient. It is, therefore, the conviction of the Association that all these services which affect the care and treatment of Veteran patients should be under the control of the Chief Medical Director, and that these functions should not be controlled outside of medical channels.

Factors Influencing VA Administration

6. Detailed studies have been made of the medical facilities of the Veterans Administration and recommendations filed. These are available in several published reports. Attention is invited to the following situations: 1. In medical matters the judgment of medical personnel is subordinate to that of non-medical personnel. 2. The location and construction of Veterans Administration hospitals is now an independent function. 3. The entire division of Special Services is outside of medical supervision. 4. Fragmentation of authority exists not only in the central office but in the field. 5. Hospital management is subordinate to various independent divisions and the manager is obliged to report to different supervisors in different areas of activity. 6. Medical supply includes a host of technical items, changing rapidly with changing professional practices; it is now combined with general supply. The Association firmly believes that medical judgment should carry more weight in reaching decisions in all these matters.

Suggestions for Maintaining Care

7. Suggestions such as the following seem to offer a means of continuing the best care and treatment of the veteran patient:

(a) The Chief Medical Director should have supervision over the functions of Special Services in the hospitals.

(b) The Chief Medical Director should have full voice in matters relating to hospitals and clinics and all activities having to do with treatment of patients, education and research.

(c) The Chief Medical Director should have authority in the allocation of the various types of hospital personnel to the end that best medical care can be rendered.

(d) Control of hospitals and other medical field stations that is exerted by the Administrator should channel through the Chief Medical Director. It is important that this concern the budget, construction, personnel, equipment and supplies.

8. The reassurance voiced by General Gray in his letter to the deans of January 23, 1951, and his statements to the Executive Council of the Association of American Medical Colleges on February 9, 1951, will restore seriously damaged staff morale only if followed immediately by constructive action. Such action is necessary at once to insure the continuation of the fine professional care given veterans. The high quality of this care is recognized and appreciated by the veteran patient himself and by his family and friends.

9. The medical schools are interested in the highest quality of patient care combined with a sound plan for the education of young physicians. The best medicine is practiced where medicine is taught and where medical research is conducted.

The urgent need for prompt action was voiced unanimously by the representatives of fifty medical schools on February 11, 1951, in Chicago. It is essential that a sufficient degree of autonomy and authority be given the Division of Medicine and Surgery to insure that the veteran patient will continue to receive the highest quality medical care.

". . . The general practitioner is in fact the principal exponent of social medicine in the field, and this is at once the joy and the nightmare of general practice. There is continual interest for the man who recognizes that the real task of general practice lies in the promotion of health and in the prevention and cure of ill-health within the natural environment of family and community life. But there is constant frustration for the doctor whose training has moulded him to the view that the problems of disease must always be considered in isolation from the surroundings where they occurred—for the surroundings will always intrude to thwart his efforts to recreate the artificial conditions of the hospital ward. . . . In medical training it has sometimes been as though Mother Church, when sending a man to the mission field in Darkest Africa, has trained him only in the finest points of theology, while omitting altogether to discuss the people he would meet in his new parish, their beliefs and habits, and their occasional primitive urge to eat missionaries."

—Dr. J. H. F. Brotherston, Universities Quart., August, 1949, p. 768.

Report of the Joint Committee on Medical Education in Time of National Emergency

The Joint Committee on Medical Education in Time of National Emergency which represents the Association of American Medical Colleges and the Council on Medical Education and Hospitals of the American Medical Association, has studied carefully the presentation of Dr. Howard Rusk, on February 12 of the Health Resources Advisory Committee's estimates of the present needs for, and means for, increasing further the production of physicians.

Representatives of the Joint Committee and Dr. Rusk's Committee met on February 28 to discuss the basis for these estimates. Following this, the Joint Committee met in Washington on March 8 with Dr. Rusk's Committee. The Joint Committee met again on March 18 in Chicago at which time the following statement was approved:

The Joint Committee agrees that the proposed mobilization requires that close attention should be given to increasing further the production of well trained physicians. It seriously questions, however, whether the estimates presented by Dr. Rusk's Committee should be accepted as fixed and definite goals.

In the Appendix of this report are presented specific criticisms with respect to the estimates offered by Dr. Rusk's Committee.

Acceleration Program Is Questionable

The Joint Committee does not believe that the evidence presented to it is sufficient to necessitate embarkation on a program of acceleration. The price of acceleration has proved to be lowered quality of graduates, exhaustion of faculties, and serious curtailment of research. Because of the possibility of weakening one of this nation's major resources, this is a greater price than now appears to be justified. The Joint Committee, therefore, does not at this time recommend that the medical schools adopt an accelerated program.

The Joint Committee does urge each medical school to examine again its resources and needs with the aim of increasing its enrollment and output to the fullest extent that is consistent with the maintenance of high quality in education and research. In this connection it should be noted that in the past 10 years the freshman classes have increased 23%, an expansion equivalent to the opening of at least 15 new medical schools. The production of physicians is also being increased further as a result of the falling attrition rate in the medical schools.

Increased Financial Support Needed

It is recognized that additional financial support and in many instances, expanded clinical facilities, will be needed if the schools are to materially increase their present enrollment, and that active steps may be needed to meet these needs.

The Joint Committee is of the opinion that it is impossible to set specific goals as to the number of additional physicians that will be required to meet the Nation's needs in the present or possible future emergency or as to the number of additional students that each medical school should attempt to enroll. The need for physicians is influenced by many unpredictable factors, such as advances in therapy, improvement in transportation, increased use of hospital facilities and of technical assistants, which will increase the number of patients to whom individual physicians can minister satisfactorily. On the other hand, military requirements, civilian disasters, an aging population, increasing numbers of women in industry and speed-up factors which may be a part of the picture of mobilization tend to increase health problems. It is, therefore, impossible to predict accurately the exact number of physicians that will be needed at any specific future time.

Standards Must Be Maintained

The rapid production of half-trained men will make statistical charts look better but will not improve the health of the nation. The current standards of medical education have not been achieved without a struggle. It is the responsibility of the medical educators to maintain standards and thus to insure the continued improvement in the health and welfare of the nation.

The Joint Committee recalls to the attention of the medical schools its recommendations with respect to the medical curriculum in time of national emergency as set forth in its statement dated November 1, 1950.

> For the majority of medical schools the committee recommends as an essential during an extensive emergency or war that the curriculum extend over four 12 month years . . . As long, however, as vacation is permitted after completion of college, and medical schools continue to commence in September, three 12 month and one 9 month years are recommended.

The reasons for recommending this lengthened course and the types of instructional programs, including R.O.T.C. programs, that could be encompassed in such a lengthened academic year have been set forth in detail in the statement of November 1, 1950 and do not need to be repeated at this time. Since it would now appear that no general acceleration of higher education is expected at this time, the Joint Committee recommends that, for the present, in addition to permitting a vacation between the completion of college and the commencement of the medical school, a vacation be allowed between the first and second years of the medical school course since this is a period of recuperation and readjustment at a critical point in a student's course that should be preserved as long as feasible.

The Joint Committee, in making the above recommendations, recognizes that changes in the national or international situation may at any moment require a revision of these recommendations. If and when such changes occur the Joint Committee will be prepared to act promptly.

Dr. Stockton Kimball, Chairman, Dr. Joseph C. Hinsey, Dr. A. C. Bachmeyer, Dr. Dean F. Smiley, Dr. George P. Berry, Dr. Herman G. Weiskotten, Dr. Harvey B. Stone, Dr. Victor Johnson, Dr. Donald G. Anderson, Secretary.

APPENDIX

An analysis of the overall national needs for medical and health manpower during this period of national emergency was presented by Dr. Howard A. Rusk in a paper entitled, "Medicine, Mobilization and Manpower," delivered in Chicago before the Congress on Medical Education and Licensure on February 12, 1951. This analysis by the Health Resources Advisory Committee of the National Security Resources Board sets specific goals for the medical schools for increasing further the production of physicians.

In 1954, according to the report, 87 per cent of the physicians will be devoting themselves to civilian care, 9 per cent to the armed services and 4 per cent to certain special needs. The chief problem, thus, is civilian care.

The very method relied on by the committee to estimate further civilian "needs" of this country for physicians makes inevitable the conclusion that the output of physicians will be insufficient. Thus, for example, if the number of physicians living in 1949 had been 100,000 more than the 201,300 reported, the method used would still have predicted a large deficit of physicians in 1960.

Crude Population Ratio Is Misleading

On the basis of an analysis of the figures reported by the committee the following points were made:

1. The crude physician-population ratio is not a satisfactory statistic to indicate the availability of adequate medical care. The national distribution of physicians, the local accessibility of physicians, the availability of special services and of diagnostic and therapeutic facilities, and, above all, the quality of the service rendered are among the important features which help to determine whether ade-

quate medical care is available. The report, however, does not consider these points. It is based on maintaining a ratio of one "active" physician to 845 civilians for the nation, the ratio existing in 1949. (When all living physicians are counted there was a ratio of one physician to 741 persons in the United States in 1949.)

2. Even if one were to accept the "active" physician-population ratio as a satisfactory criterion for measuring the supply of physicians' services, the actual figures used in the report are debatable. The total number of living physicians in 1949, Dr. Rusk's Committee's base year, is taken from the American Medical Directory and can be assumed to be correct. From this number has been subtracted the estimated number of inactive physicians. For 1949, this figure is estimated by the Committee as 23,400. The method of estimating the number of inactive physicians is based on a study reported by the Committee's statistical consultant in 1943. Its applicability in this instance is questionable. Thus according to the American Medical Directory there were in 1949 only approximately 6,700 physicians not in private practice and only 9,700 retired and not in practice of any type, a total of 16,400 "inactive" physicians as compared to the Committee's figure of 23,400. In an extreme national emergency, it is logical to believe that some of these 16,400 qualified physicians might well be drawn back into medical service.

Factors Not Considered by the Rusk Report

3. The estimate of the number of physicians available after 1949 is based on the age distribution and life tables and on the assumption that the medical schools will graduate 6,000 students annually from 1953 to 1960 and that during this same period there will be an annual increment of 500 foreign graduates. The mortality tables used may yield higher death rates than is actually found true for physicians. At least, the American Medical Association has some evidence pointing in this direction. The graduates between 1953 and 1960, according to estimates by the Association of American Medical Colleges will likely average 6,500 or higher. The increment of foreign graduates may be increased as a result of the pressure of hospitals for interns and residents and other factors.

4. The assumptions are made that during an emergency period physicians must carry on as usual with no increase in load and that more efficient methods of handling health needs will not be utilized.

Actually, during World War II, the physician-population ratio was one to well over 1,200 and yet, during this period, according to the usual indices, the health of the country improved. It is now proposed that one "active" physician to 845 civilians is necessary, although even since World War II, developments in medical care make the individual physician more effective than ever before. If the ratio of one physician to 950 civilians were used and all of the other estimation methods of the report followed, the projected physician population would be more than adequate to care for the health and welfare of the country through 1960.

5. Included in the 1949 physician-civilian population on which the report is based are physicians in industry, rehabilitation, public health services, in both state and federal governments, and medical school teachers. For the years after 1949, however, the assumption is made that the staffing of these services must be in addition to the civilian needs and must in no way lessen the civilian requirements. No justification for this shift is given. By it, an additional 8,400 physicians are estimated as required in 1954 and 10,300 in 1960.

Civilian Defense Needs

6. Civilian Defense states that it will require 3,300 physicians by 1954, increasing to 4,300 in 1960. Because of the restricted nature of the basis of these requirements, a discussion of them is not in order. It appears, however, that the equivalent of some 300 physicians are included in the estimate for desk positions and that the remaining three to four thousand constitute a reserve. It is not clear

why this reserve, which certainly cannot be expected to remain inactive, should not be included in the group of physicians servicing the civilian population.

7. For industrial needs, 1,500 physicians over and above those now existing are stated as required for 1954 and 2,000 by 1960. It is questionably assumed that these physicians are not to lessen the work of the physicians treating the civilian population.

8. According to the estimates made by the United States Public Health Service 1,200 more doctors will be needed in health departments by 1954. It is assumed that the work of these physicians will in no way lessen the need of the civilian population for the present type of medical care received.

9. The requirement of 500 additional physicians to devote themselves to full time teaching in the medical schools is based upon estimates made by the Federal Security Agency. It is the number necessary to fill existing vacancies in medical schools. No attempt was made by the Committee to estimate the needs of the medical schools should they expand and accelerate as advised by the Committee.

Troop Needs Analyzed

10. A troop strength in 1954 of five million is assumed by the Committee. The use of a single ratio to determine physician needs for the armed forces is no more justifiable than it is in the civilian population. The armed forces requirements, nonetheless, are based upon a requirement of one physician for every 270 troops. Under peace time conditions, even in case of an emergency situation such as exists today, the number of physicians required is materially less than will be true during more active and widespread troop activities. For large numbers of young men in basic training camps, one physician for every 270 troops seems unjustifiably high. During a national mobilization, a certain number of physicians may have to stand by doing virtually no medical work, but such numbers can be minimized. The utilization of physicians during the last world war was admittedly wasteful. It is hoped that steps can be taken to prevent such a waste this time. Lowered military requirements may be possible.

11. The high quality of medical education which has been achieved in this country during the past forty years is the result of the close ties between research and teaching. In the report, no mention is made of the importance of medical research, either as an end in itself or as a means of maintaining quality instruction in medical schools. Continuation of research on full scale may prove to be fully as important as increased output of physicians.

SUMMARY

The specific goal of 22,000 additional physicians by 1960, above anticipated production, set by the Committee for the medical schools is based upon a series of assumptions that are debatable. Other equally sincere estimates might vary greatly from this figure. The statistical methods relied on by the Committee are also open to question. That the medical schools have a great responsibility in helping to improve the health and welfare of the country is not questioned. How this can best be done is a problem which deserves the most thorough consideration by the medical schools, the medical profession, other interested civic groups and governmental agencies. If this country is to prevail over its enemies, it will not do so by numbers but by the superior quality of its educational programs and by its superiority in research and other forms of intellectual productivity.

The Journal of
Medical Education

Volume 26 No. 3 MAY, 1951

Conference on Undergraduate Education in Psychiatry Ithaca, June 21

The Conference on Psychiatric Education, under the auspices of the American Psychiatric Association and the Association of American Medical Colleges, will open on June 21 at Cornell University. It will last not less than seven or more than ten days. A planning committee of 27 members has decided that the group should devote itself to psychiatry in undergraduate medical education, with the agenda of the meeting divided into five major study areas. The conference, limited to participation by approximately 70 delegates, will be divided into six working groups, each group to work simultaneously on the same problem. The study areas as they have been defined by the planning committee will be: (1) The Student—His Adaptation and Progression; (2) Community Needs—Rural and Urban; (3) The Setting—The Medical School As It Exists Today; (4) General Principles, Content, and Methods of Teaching Psychiatry in the Undergraduate Medical Period; (5) Administrative and Integrative Patterns of Organization. It is hoped that a considerable, but not complete area of agreement will be discovered, and that the extent and practical significance of the areas of agreement and divergence will lead to a better perspective of the problem for the improvement of medical education.

In recent years there have been many studies of medical education, some devoting their attention to general aspects of the subject, others limiting their concern to some more or less highly specialized segment. Regardless of the objective, many participants have testified that the greatest benefit has often resulted from teachers of other major clinical subjects and deans of schools of medicine. In addition, there will be in attendance a few national leaders of thought and action in related fields.

In view of the broad range of interests indicated above, it is obvious that a severe limitation must be placed on the number of participants from any one group. Further, since this is to be a working conference, the overall attendance must be restricted. While this is regrettable from many standpoints, it serves to maintain the basic pattern of small group meetings, generally accepted as the most effective method.

Psychiatry has been one of the later major medical specialties to undergo thorough reorganization of the content and methodology of its teaching program. The very fact that such reorientation has taken place, is not fully understood and accepted by many teachers in both basic science and clinical departments. As a result, efforts to place psychiatry on an even footing with subjects of equivalent importance, have not met with uniform success. What is perhaps more serious, clinical instructors have usually made no effort to demonstrate to the student in his care of patients on the general wards and in out-patient clinics, the role of the emotions and personality of the patient in the etiology, the course and the prognosis of ailments which are therefore accepted as purely physical. Meanwhile, the psychiatrist has been afforded no opportunity to bring about an appreciation of the importance of this factor in the setting best adapted to such teaching.

It is probable that this latter impediment will not be wholly removed until general medical ward and out-patient teaching is conducted by a new group of

small group conferences when these have been held in conjunction with the study.

It is therefore eminently fitting, that the current study of undergraduate education in psychiatry should assign a major role to a conference, to which are to be invited not only leaders of undergraduate psychiatric education, but outstanding instructors, who are themselves thoroughly grounded in modern psychiatric concepts in their own basic training, and who are conscious of, and dealing successfully with, personality problems in the care of their own patients. Therefore, it is entirely proper that this first major study of psychiatric education should concern itself with the basic problems of undergraduate teaching. Emphasis will be placed on the contribution which psychiatry should make to the armamentarium of the physician, and the methods by which this may be effected—not on the development of psychiatry itself.

It is sincerely hoped, that the uniform high level of the work of preparatory commissions, the broad coverage of participants, and the small group organizational pattern adopted for the conference, will combine to produce not only significant advances in the content and method of psychiatric teaching, but will eventually result in more attention to emotional and personality factors in all medical practice.

—J. McK. M.

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Too Few Training for Basic Science Fields

Responsible individuals in medical education have become increasingly aware in the past decade of a growing failure to recruit men into the basic science fields related to medicine. Such awareness should long since have shocked us into vigorous action. For creative minds and teaching abilities in these fields take time to develop and emerge.

We cannot blame this failure on the war or on the present national emergency, despite their undoubted effect on the situation. Nor can we say that the more vigorous problems created by the clamor for the development of general practioners have taken our time and energy. Finally, it is not enough merely to acknowledge that the fundamental pedagogic and philosophical issues involved in the evolution of programs of study to meet modern needs, prescribe different requirements in the basic science fields.

The prospect remains that we are now entering on the seven lean years and that the situation is likely to grow worse before it can possibly improve.

The need for men is felt most acutely perhaps in the field of pathology. Here a by-product of the emphasis on graduate training has been an increased demand for pathologists in hospitals seeking accreditation for specialty board training.

While the discipline of pathology is undergoing its own evolution, it would seem to have settled in the minds of many of its potential recruits as a sort of service department for the hospital, the requirements of legal medicine, and the routine teaching program for medical students. In certain areas it has become segmented into special pathologies related to clinical fields. The old associations with bacteriology and diagnostic laboratories have largely splintered off and the field of general pathology is in danger of narrowing.

Here is a curious and tragic dissolution of a great medical tradition, a tradition which describes a function of the utmost importance at the cross-roads of medical education, medical practice, and medical science. One cannot imagine a more challenging field of opportunity than that which is open to the pathologist by virtue of his necessary involvement in all of these areas. His work is directly related to the quality of medical care, the vigor of medical teaching, and the application of scientific methods of thinking of the professional fraternity. This comprehends the vitality and integrity of the physician in modern society.

The plain fact is, we need many more pathologists today. The field deserves the efforts and imagination of the ablest men in medical science. We must act on this conviction and present to students the opportunities pathology offers for the realization of their aspirations as vividly as we present the blandishments of the specialities and general practice. In most in-

stances we express our academic appreciation of the basic worth of this field financially. It is time we expressed ourselves more fundamentally, in those subtle areas of social intercourse where we can reflect and perhaps promote the prestige of a calling which is as essential as the more glamorous clinical specialities.

—J. B. T.

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Medical Film Institute Reviews and Bulletins Available

The Medical Film Institute of the AAMC has available for distribution a set of 20 reviews of motion pictures in the field of cancer. The reviews represent the first installment of a study of such films which is supported by a grant from the National Cancer Institute, U. S. Public Health Service. The set is staple bound for easy handling as a unit. In addition, each review is separately stapled so that faculty members with special interests may procure individual reviews for their particular use. The subjects covered can be roughly divided into clinical pathology, general oncology, gynecology, gastroenterology, laryngology, and tumor surgery. Additional reviews will be made available in forthcoming months. Further information may be obtained by writing to the Medical Film Institute, 2 East 103d Street, New York 29, New York.

The Institute has also prepared and made available two bulletins entitled "Medical Teaching Motion Pictures Now in Production." These are particularly useful to medical teachers, medical film producers and film authors. As films in the bulletins are completed, they will be catalogued by the Institute. Copies of the bulletin are available from the Institute upon request.

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Nominations for the Borden Award

Dr. David Barr, chairman of the Committee on the Borden Award of the Association of American Medical Colleges, invites attention to the fact that the deadline for receiving nominations for the Borden Award in the Medical Sciences for 1951 is July 1, 1951.

The award was established by the Borden Company Foundation, Inc. and consists of $1,000 in cash and a gold medal to be granted in recognition of outstanding clinical or laboratory research by a member of the faculty of a medical school which is a member of the Association of American Medical Colleges.

Regulations Governing the Award

1. Nominations may be made by any member of the faculty of a medical school which is a member of the Association of American Medical Colleges.

2. The Award in any year will be made for research which has been published during the preceding five calendar years.

3. No person may receive more than one Borden Award for the same research, although he may receive a later Award for a different research project.

4. If two or more persons who have collaborated in a project are selected for an Award, the gold medal and check shall be presented to the group, and bronze replicas of the medal presented to each of the collaborators.

5. The Association may refrain from making an Award in any year in which no person reports research of the quality deserving an Award.

6. Only one Award shall be made during any one year.

7. A nominee who fails to receive the Award may be nominated for the Award for the same work in a subsequent year.

8. The nomination should contain the academic history and scientific accomplishments of the candidate and a reasoned statement of the basis for the nomination.

9. Five copies of each nomination should be forwarded to the Secretary of the Association (D. F. Smiley, Room 1001, 185 North Wabash Avenue, Chicago 1, Illinois), together with five sets of reprints bearing on the investigation for which the nomination is made. The reprints will be returned if requested.

10. Nominations must be in the hands of the Secretary before July 1, 1951.

College News

Medical College of Alabama

Dr. *James J. Durrett,* formerly Trade Commission Medical Chief, has accepted appointment as dean of the Medical College.

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Bowman Gray School of Medicine

Approximately 200 doctors attended the two day meeting of the Wake Forest College Medical Alumni Association on April 6-7. Jim Weaver, athletic director of the college, was the speaker.

Ten students were inducted into the Beta chapter of Alpha Omega Alpha, national honor medical society, in exercises held on April 10. Dr. *Louis N. Katz,* director of the cardiovascular department, Medical Research Institute, Michael Reese hospital, was speaker.

Dr. *Marjorie Swanson,* assistant professor of biochemistry, has been granted $3,200 by the American Cancer Society for study of the metabolism of washed tissue particles.

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University of California, S. F.

Dr. *Gail D. Adams* will join the staff at the end of the year as an associate physicist. Dr. Adams will be associated with Dr. *Robert Stone,* professor of radiology, on the Atomic Energy Commission sponsored project for biological and medical research involving the use of the Medical School's new 70-million volt synchrotron.

The building for the synchrotron, now under construction, is expected to be completed by February, 1952, at which time the machine will be installed. Research work is expected to begin in March. The project, dedicated to medical experimentation with the synchrotron, is expected to develop uses for the machine in clinical therapy, first using high energy x-rays, and probably later an electronic beam.

Since 1941 Dr. Adams has been associated with Professor *Donald W. Kerst* at the University of Illinois, the inventor of the Betatron. Since 1942, Dr. Adams has been interested in radio-biological research at Illinois, evaluating high-energy radiation from the betatron in the treatment of deep cancers.

On Wednesday, March 21, Dr. *Edwin L. Bruck,* clinical professor of medicine, spoke as part of the Charter Exercises honoring the memory of Dr. *Herbert C. Moffit,* former dean of the school of medicine.

Drs. *Herbert F. Traut* and *Milton Rosenthal* have received a grant of $20,000 from the Cancer Institute of the U. S. Public Health Service in order to allow them to further their experiments in the detection of stomach cancer at an early stage.

Construction of the main unit of the new Medical Sciences building has begun. The unit, to cost a total of $5,650,246, will be completed in about two years. At that time another large unit of the building will be begun. Funds being used are part of over 20 millions appropriated by the state legislature to bring the nucleus of a modern medical center to the Bay area.

Dr. *Samuel Jiro Kimura,* instructor in ophthalmology, has been awarded a $30,000 fellowship, to be given over a 5 year period, from the John and Mary R. Markle Foundation as a scholar in medical science. Last year Dr. Kimura was sent by the National Research Council to carry on research in radiation cataract in Nagasaki, Japan.

Aided by the continuation of the state legislature's annual appropriation of $250,000, the cancer research program has made substantial progress. The total cancer budget for the year amounted to $1,208,883, accrued through additional grants from the American Cancer Society, the Damon Runyon Fund, the U. S. Public Health Service, and other private foundations.

Chicago Medical School

Two grants from the National Cancer Institute, U. S. Public Health Service, have been made to the school for cancer teaching and research under the direction of Dr. *Philippe Shubik*. One grant is for $25,000 for cancer teaching, the other for $10,000 for research.

Dr. *Francis J. Mullin,* formerly dean of students at the University of Chicago, division of biological sciences, has been appointed dean of the Chicago Medical School and professor of physiology.

The school has received a $10,000 subsidiary scholarship from Mrs. Sadye Arkin, in memory of her husband, Harry J. Arkin. The fund will be used to make up the balance between the tuition received from one student and the actual cost of his four year education.

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University of Colorado

In conjunction with local county medical societies, the University of Colorado department of medicine is sponsoring a six week series of post-graduate teaching conferences for doctors in northeastern Colorado and adjoining areas of Wyoming, Nebraska and Kansas. The conferences, to be directed by faculty members of the department began on April 19 at Weld County General Hospital; Greeley, Colorado. The program offers a review of recent advances in surgery, medicine and obstetrics for practicing physicians. It is the first such program offered by the university.

Dr. *C. Wesley Eisele,* formerly associate professor of medicine at the University of Chicago, has been appointed associate professor of medicine and assistant director of graduate and postgraduate medical education.

Miss *Evelyn B. Horstman* has been appointed assistant professor of nursing and coordinator of rural community and hospital nursing.

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Columbia University

The school of oral and dental surgery has been placed on the American Dental Association's list of approved dental schools for the first time since 1945. Thus the university's plan to integrate the teaching of medicine, public health and dentistry has become successful. The original difference of opinion between the university and the association occurred when the university appointed the head of dental training to a position as associate dean of the faculty of medicine.

The Health Information Foundation has granted the university $92,000 to conduct a two year survey for the purpose of finding out how Americans spend the 8 billions annually payed by private persons for medical care. Oscar Serbein Jr., assistant professor of the graduate school of business, is in charge of the project.

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Cornell University

The university's medical college and New York hospital are jointly sponsoring a Practitioners Conference, held every Wednesday afternoon at the New York Hospital-Cornell Medical Center. Programs of special interest to the general practitioner are arranged.

Dr. *Robert W. Hunt,* assistant clinical professor of surgery in the department of urology, died March 31 in St. Clare's hospital. Dr. Hunt was 46 years old. He received his degree from Stanford and at the time of his death was director of urology at St. Clare's.

Tne annual Alumni Association Award of Merit was given to Dr. *Connie M. Guion,* professor of clinical medicine. Presentation of the award was made on April 21 at New York hospital.

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Duke University

Dr. *Philip Handler,* professor of biochemistry and nutrition, is leaving for Japan in May as part of a team of 12 medical educators who will attempt to improve medical teaching there. Dr. Handler will spend two months there and will report on his findings to the military commander of the area.

The team of scientists, each a specialist in his field, will try to bring teaching methods in Japan in line with those of

the United States. As part of their duties they will examine teaching and research methods in Japanese medical schools. They will also deliver model lectures and demonstrations to students and staff members. The project is being directed by the Unitarian Service Committee acting on behalf of the Department of Defense.

A month's course in medical mycology will be offered at the School of Medicine and Duke hospital from July 2 to July 28, under the direction of Dr. *Norman F. Conant*. Emphasis will be placed on the practical aspects of the laboratory as an aid in helping establish a diagnosis of fungus infection. Students will work with patients, clinical material, cultures and laboratory animals. They will also have an opportunity to study pathologic material, gross and microscopic, if their previous training will enable them to benefit from a study of such material. Inquiries concerning the course should be directed to Dr. Conant, Duke University School of Medicine, Durham, North Carolina.

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Emory University

Dr. *Curtis Dudley Benton Jr.*, of the eye, ear, nose and throat service of Atlanta's Grady Memorial hospital, has been appointed associate in ophthalmology and research director of the Grady Clay Memorial Eye clinic.

Dr. *J. D. Martin Jr.* has been promoted from associate professor of surgery to professor of clinical surgery; Dr. *John B. Cross* from assistant professor to professor of clinical obstetrics; Dr. *Vernon E. Powell* from instructor to assistant professor of clinical medicine. Drs. *William C. Hathcock, James T. King* and *Buford L. O'Neal* have been made associates in otology.

Drs. *William Cecil McCarity* and *Roy Lamar Robertson* have been appointed instructors in surgery. Drs. *James Anthony* and *James Lowell* have been named research fellows in surgery.

On a voluntary basis, Dr. *Rolla Eugene Dyer*, director of research for the Emory Winship clinic, will serve as professor of medicine.

The George Washington University

Dr. *Charles Stanley White* was given the annual alumni award for distinctive service to the University and community at the 25th annual banquet and alumni reunion of the George Washington University Medical Society.

Dr. *Ivor Cornman*, assistant research professor of anatomy, has received a $4,294 grant from the American Cancer Society. Dr. Cornman will make tests with antibiotic drugs being developed at the department of medicine by Dr. *Monroe J. Romansky*, associate professor of medicine, in an attempt to find drugs that will destroy cancer cells without harming normal tissue.

The Council on Medical Education and Hospitals of the American Medical Association and the American Board of Psychiatry have approved a two year specialty training program for residents in psychiatry. This program will be in addition to training already in progress at the hospital. The training program in psychiatry is conducted in cooperation with the staff of St. Elizabeth's hospital, under the direction of Dr. *Winfred Overholser*.

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Harvard Medical School

During the last quarter of 1950, the school received gifts totaling $350,000. $201,540 was received from the estate of Mabel Elliott Day to establish a scholarship fund for medical students; $148,837 was received from the estate of John Torrey Morse for the school of dental medicine.

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University of Illinois

At a joint meeting of 27 national, Illinois and Chicago health profession organizations, plans for the proposed new unit of the Dentistry-Medicine-Pharmacy building at the university were revealed. According to Dr. *A. C. Ivy*, vice-president of the university in charge of the Chicago Professional Colleges, and Dr. *Earl R. Serles*, dean of the College of Pharmacy, the university is preparing to make a 33 percent increase in its undergraduate enrollment in dentistry, medicine and

pharmacy for the purpose of relieving the present shortage of health personnel in the state and for meeting manpower requirements of the armed services and civil defense programs. However, they announced, that in order to accomplish this program, new classroom and laboratory facilities will be necessary.

The university is seeking an appropriation of $6,340,000 from the General Assembly of the State of Illinois to provide for the construction of a six-story classroom and laboratory building opposite the Research and Educational hospitals. If the building is secured, the university will be able to increase its enrollment by 536 students, or from the present registration of 1424 to 1960. In addition, 150 student nurses and as many as 200 graduate students in the health sciences could be accommodated. Specifically, the College of Medicine could boost its undergraduate enrollment from 166 to 200 students per class.

Dr. *Richard E. Marcus* was named a scholar in medical science by the John and Mary R. Markle Foundation of New York City. He will receive $6,000 annually for five years according to the terms of the grant. Dr. Marcus currently serves as assistant professor of ear, nose and throat and is also assistant director of the speech and hearing rehabilitation unit at the Illinois Eye and Ear infirmary.

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University of Iowa

The American Cancer Society has granted the medical school $40,450 for various research projects. These include $16,000 to Dr. *Titus C. Evans*, director of the radiation research laboratory, $5,000 to Dr. *R. G. Bunge*, associate professor of urology, and $5,000 to Dr. *Willis M. Fowler*, professor of internal medicine.

The Atlas Powder Company of Delaware has granted $10,000 to Dr. *P. C. Jeans*, professor of pediatrics for the study of food emulsifiers.

Dr. *Robert L. Jackson*, associate professor of pediatrics, has received a $2,500 grant from the Iowa Heart Association.

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Jefferson Medical College

The atomic medicine course, last year restricted to members of the junior class, has been expanded to include the entire student body. The course, first of its kind instituted in a medical college, was arranged with the cooperation of officers of the radiological branch, Division of Military Application, Atomic Energy Commission.

Fred Harbert, Captain (MC) USN, has been appointed professor of otology and head of the department.

The college has recently received the following grants: from the U.S.P.H.S.: Dr. *John H. Gibbon Jr.*, department of surgery, $32,205 for development of a mechanical heart and lung; Dr. *Leandro M. Tocantins*, department of medicine, $10,962 for a study of the source and nature of the anticephalin activity of blood; Drs. *Robert J. Rutman, A. Cantarow* and *Karl E. Paschkis*, department of biochemistry, $7,500 for study of the intracellular distribution and rate of synthesis of liver protein and nucleoproteins in acetaminofluorene treated rats; Dr. *William H. Pearlman*, department of biochemistry, $4,158 for study of isolation of hormonal steroids from placenta; Dr. *Savino D'Angelo*, $11,223 for study of thyroid-pituitary interaction. From the National Institute of Mental Health; Dr. *Baldwin L. Keyes*, $37,400 for psychiatric training; Dr. *Bernard J. Alpers*, department of neurology, $17,760 for undergraduate training. American Cancer Society to Drs. *Karl E. Paschkis* and *A. Cantarow*, department of biochemistry, $6,631 for study on the influence of hormones on cancer induced by 2-acetaminofluorene; National Cancer Institute to Dr. *Theodore P. Eberhard*, department of radiology, for oncologic teaching, $25,000; National Heart Institute to Dr. *Hobart A. Reimann*, department of medicine, $13,997, for cardiovascular undergraduate training.

Johns Hopkins University

On the occasion of the university's 75th anniversary celebration, Dr. *Detlev W. Bronk,* president of the university, announced that $1,800,000 had been given by the trustees of the university and hospital as the first step in the creation of a long range program of financing which, it is hoped, will ultimately raise between 75 and 100 million dollars. This financing program will enable the university to adopt a much different educational system as well as to expand the teaching, research and medical care activities of the hospital, the school of medicine and the school of hygiene and public health.

During the same ceremonies, five honorary degrees were conferred upon men who were either graduates or faculty members of the university. The men honored were: Dr. *Justin M. Andrews,* director of health and safety for the Tennessee Valley Authority; Dr. *Warfield T. Longcope,* professor emeritus of medicine; Dr. *E. V. McCollum,* professor emeritus of biochemistry; Dr. *Edwards A. Park,* professor emeritus of pediatrics; and Dr. *Lewis H. Weed,* professor emeritus of anatomy and former director of the school of medicine.

Charles P. Winsor, Ph.D., assistant professor of biostatistics at the school of hygiene and public health, died April 4. He was 55 years old.

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University of Kansas

On April 24 and 25, Dr. *Chauncey D. Leake* of the University of Texas delivered the second course of lectures in the Clendening Lectureship. His topics were "New Generalities from Old Egyptian Medical Papyri" and "The Hearst Medical Papyrus."

One of the five research scholarships of the American Cancer Society has been granted to the department of oncology. The awards grant $18,000 for use over a three year period.

Dr. *A. Theodore Steegman,* professor of neurology, has been awarded a grant of $9,650, to be used over a three year period, by the National Advisory Neurological Diseases and Blindness Council.

Dr. *G. Wilse Robinson Jr.,* assistant professor of psychiatry and neurology, has been appointed to the board of consultants of the Mental Hospital Service, under the auspices of the American Psychiatric Association.

Dr. *Richard L. Sutton Jr.,* chairman of the department of dermatology, and *Richard L. Sutton Sr.,* emeritus professor of dermatology, have been elected corresponding members of the Swedish Dermatological Society.

The 1951 freshman class in the school of medicine will be the largest in the history of the school. It will consist of 120 entering students, half to begin work in June, the remainder in September. This represents an increase of approximately 50 percent over the size of classes admitted prior to the adoption of the Kansas Rural Health Plan in 1949.

In order to accommodate this large increase in enrollment, several steps have been taken. The new class will spend its first year studying on campus at the university proper at Lawrence before proceeding to the medical center at Kansas City. When they reach their junior and senior years, only 90 of the 120 will be in school each quarter, the remainder either being on their free quarter or on preceptorship. Finally, the new Medical Sciences building now under construction at the medical center is scheduled for completion by the spring of 1952, in time for the class now being admitted to use in September of next year.

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University of Minnesota

On March 20 the Variety Club Heart Hospital, a fully equipped 78 bed unit was opened for the admission of patients at the University of Minnesota medical center. The hospital is a result of more than $460,000 in funds raised by the Variety Club of the Northwest.

Dr. *George E. Burch,* chairman of the department of medicine, Tulane University, will deliver the first George E. Fahr lecture on May 8, and will also participate in a continuation course in electrocardiography for general physicians on May 7 to 11.

A continuation course on the Minnesota Multiphasic Personality Inventory will be presented for general physicians May 14.

Dr. *Walter G. Maddock,* professor of surgery, Northwestern University, will be guest faculty member May 17 to 19 in a course in general surgery. The course will stress gastro-intestinal surgery.

Dr. *Irving S. Wright,* professor of clinical medicine, Cornell University, will participate in a course in cardiovascular diseases to be presented at the Center for Continuation Study on May 24 to 26.

Two members of the faculty spoke at the semi-annual Inter-Agency Seminar on Hospital Administration held from April 16 through May 4 under the sponsorship of the Navy department. They were Dr. *Harold S. Diehl,* dean of the medical school, and Professor *James A. Hamilton,* director of the course in hospital administration.

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University of Nebraska

Mr. *Leon Lucas,* president of the American Association of Psychiatric Social Workers, has been appointed director of psychiatric social work at the Nebraska Psychiatric Unit.

Dr. *Robert Hugh Dickinson* has been appointed associate in neurology and psychiatry. He will be director of the outpatient service of the Psychiatric Unit.

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New York Medical College

Dr. *Carl Neuberg* has been named associate in the department of biochemistry with the rank of professor in the medical college.

Captain *Irvin C. Plough* has been appointed director of the department of medical military science. He succeeds Lieutenant Colonel *H. W. Glascock Jr.* who has become commanding officer of the 11th Evacuation hospital at Fort Hood, Texas.

Dr. *I. M. Tarlov* has been appointed professor and director of the department of neurosurgery and neurology.

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State University of New York

Plans to nearly double the size of the university's two medical schools, at Syracuse University and the Long Island College of Medicine, have been announced by the state university's trustees. They announced that $8,500,000 of total capital outlay requirements of 35 million dollars had already been provided by the state. A large part of this sum will be used to erect a new medical college and auxiliary buildings to house the Long Island College of Medicine. It is expected, when the building expansion program for the two schools is completed, that they will be able to graduate 300 physicians a year, more than any other school in the country and 5 percent of the total annual number of graduates in the nation. Last year $500,000 in state funds were diverted for the use of research projects at the two medical schools.

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New York University

Dr. *Antonio M. Araujo,* recently appointed ambassador from Venezuela, held a reunion and tour of inspection with former associates at the skin and cancer unit, where he trained ten years ago.

A Japanese physician, Dr. *Yaeko Kawai,* was awarded the $2,000 Harriet Ford Griswold award to make possible a year of study here. Dr. Kawai then will return to Japan where she expects to set up a national rehabilitation center in Tokyo, making available to the more than one million disabled Japanese the most modern methods of aid in rehabilitation.

Dr. *Thomas I. Hoen* has been appointed professor and chairman of the newly created department of neurosurgery.

On March 15 and 16, Dr. *Harold Wolff,* professor of medicine, Cornell Medical School, delivered the annual John Wyckoff lectures. His subject was "Headache Mechanism."

The Institute of Physical Medicine and Rehabilitation received as a gift from the Ford Motor Company a new automobile equipped with special hand controls to assist the institute's training program.

The annual alumni day of the college of medicine was held March 31. Approximately 250 graduates returned for the ceremonies. They were told by Dr. *Currier*

McEwen, dean of the college of medicine, that $1,700,000 is available for research work this year. Dr. McEwen also said that courses in general disaster treatment have been added to the required curriculum of all undergraduates this year.

Dr. *Howard A. Rusk*, director of the Institute of Rehabilitation and Physical Medicine has been awarded the annual research award of the American Pharmaceutical Manufacturers Association for his contribution to the "third phase of medical care."

Dr. *William W. Beckman*, assistant dean of the college of medicine, died on April 12. He was 40 years old. Dr. Beckman was also assistant professor of medicine and was associated with the Rockefeller Institute for Medical Research as well as the Rockefeller Institute hospital. He was a research fellow of the Americal College of Physicians.

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Ohio State University

Dedication exercises for the new Health Center will be held May 14 through 16. Formal dedication ceremonies will be at 11:00 A.M., May 15, in the Health Center quadrangle on campus. Guided tours for visiting guests will be conducted through all buildings of the new unit that afternoon.

Raymond B. Allen, M.D., president of the University of Washington, will deliver the dedication address for the Medical Center when the $15,500,000 project is formally dedicated to the people.

Presentations will be made during the ceremonies by Dr. *John D. Porterfield*, state director of health; Judge *John H. Lamneck*, state director of public welfare; Dean *Wendell D. Postle* of the college of dentistry; and Dean *Charles A. Doan* of the college of medicine.

Also as part of the ceremonies, alumni awards of the college of medicine are to be presented to Drs. *Jonathan Forman, Joseph Hamilton McNinch, Herbert M. Platter, James Clyde Sargent* and *Alfred Heacock Whittaker*.

The program on May 16 will comprise scientific sessions of the Post-Collegiate assembly of the College of Medicine, to be held in the auditorium of the Ohio State museum. Distinguished guests will participate in the program.

New buildings to be dedicated are the 600 bed University hospital; the College of Dentistry building; the 300 bed Tuberculosis hospital; and the 140 bed Receiving hospital for mental patients. The Tuberculosis hospital, under the State Department of Health, will become a center for advanced research, special diagnosis and therapy of tuberculosis and allied diseases.

Dr. *Ralph M. Patterson*, formerly of the University of Michigan Medical School, has been appointed head of the professional staff at the new Columbus Receiving hospital and professor of psychiatry.

J. Milo Anderson, formerly superintendent of the Methodist hospital, Gary, Indiana, has been appointed superintendent of the new University hospital as well as administrator of the new Medical Center and associate professor of hospital administration. The appointment was effective April 15.

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University of Oregon

New faculty appointments announced by the university are as follows: Dr. *Allan J. Hill*, professor and head of department of pediatrics and chief of staff of Doernbecher Memorial hospital for Children; Dr. *R. Jarvis Gould*, assistant medical director and assistant professor of medicine; *J. J. Adams*, director of information services; *Dr. Harry E. Sprang*, instructor in child psychiatry.

Grants totaling $68,000 have been made in the last year by the U. S. Public Health Service for research in cancer, cardiovascular teaching and heart research. The funds will be expended under the direction of Drs. *Warren C. Hunter, Edwin E. Osgood, Archie Tunturi, Charles M. Grossman, Howard P. Lewis, William B. Youmans*, and *Herbert E. Griswold Jr.*

A grant of $17,000 from the Atomic Energy Commission will renew the project entitled "Studies on the Metabolism of Cholestrol and Ketone Bodies" being conducted by Dr. *E. S. West*, head of the department of biochemistry.

A grant of $15,000 from the Office of Naval Research will continue the project on the anatomy and physiology of the acoustic system in the brain and the mechanism of the inner ear, under the direction of Dr. *Archie Tunturi,* assistant professor of anatomy.

A grant of $10,000 from the Kellogg Foundation will assist in the work of the Oregon State Blind Commission's Division under the direction of Dr. *Kenneth Swan,* head of the department of ophthalmology.

Dr. *Norman A. David,* head of the department of pharmacology, was elected president of the Western Society for Clinical Research at the January meeting of the society.

Dr. *William Fitch Allen,* professor of anatomy at the University of Oregon Medical School from 1916 to 1946 died on March 11. Dr. Allen was 75 years old. He had made important contributions on the anatomy and physiology of the nervous system and its functional pathways, continuing his research until two weeks before his death.

Dr. *T. T. Hutchens,* department of biochemistry, has received a one year postdoctorate research fellowship from the National Institute of Health. He will study the metabolism of cholesterol in the radioisotopic laboratory.

Dr. *Warren C. Hunter,* head of the department of pathology, has been appointed acting director of the State Crime Detection Laboratory. On July 1, Dr. *Homer H. Harris* will become director of the laboratory. He is currently studying forensic medicine and crime investigation under Dr. *Thomas A. Gonzales,* chief medical examiner of New York City.

The first laboratory in the Northwest for research and treatment of diseases of the eye has been established at the medical school in memory of Dr. *John E. Weeks.* The laboratory will be under the direction of Dr. *Kenneth C. Swan,* head of the department of ophthalmology.

Dr. *John Harris,* research associate in the department of ophthalmology, has received a John and Mary R. Markle Foundation grant of $30,000 to be used over a period of five years.

University of Pennsylvania

Dr. *Walter Estell Lee,* professor emeritus of surgery, died April 5. Dr. Lee was 71. At the time of his retirement in 1946, he was vice dean for surgery.

Dr. *R. C. Buerki,* vice president in charge of medical affairs, spoke during the first week of the semi-annual Inter-Agency Seminar on Hospital Administration held from April 16 through May 4 under the sponsorship of the Navy department.

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Rutgers University

A state study commission of doctors, dentists, citizens, and legislators has recommended in their report to Governor Alfred E. Driscoll that a medical school and a dental school be established at the university here in order to provide opportunities for New Jersey students to study in their fields. Over-all cost of construction and equipment for the proposed units would be 25 million dollars with an annual expenditure of 5 millions needed to cover operating costs. The report to the Governor recommended a referendum on a general bond issue in the fall election. Some new taxation is also believed to be necessary. The proposed new schools would be built to accommodate 500 medical students and 300 dental students. A 300 bed hospital was also recommended as the minimum requirement to provide facilities for clinical and research work.

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Saint Louis University

Construction has begun on the $625,000 Cancer Research Institute at the university. Plans call for a five-story structure with facilities for research in cancer pathology, biochemistry, blood work, and clinical laboratory procedures. In addition, facilities for instruction of undergraduate medical students and residents are planned. Funds for the building and equipment were procured through a grant from the Cancer Institute of the National Health Institute of the U. S. Public Health Service.

Col. *Albert W. Shiflet,* MC, professor of medical science and tactics, has announced

a summer training program for members of the advanced course of the Army Medical Service ROTC. Thirty-five members of the present junior class must complete their training for the advanced course.

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Medical College of the State of South Carolina

Dr. *Robert B. Taft,* consultant radiologist of the National Atomic Laboratories at Oak Ridge, died on April 16 at Charleston. He was 52 years old. Dr. Taft was head of the department of radiology of the medical college.

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University of South Dakota

The university received a grant of $5,000, effective May 1, from the U. S. Public Health Service for research in the application of a newly developed diagnostic technique for the detection of brucellosis and other diseases of man and animals. The project is in the charge of Dr. *H. N. Carlisle,* chairman of the department of microbiology.

Dr. *Edward A. Holyoke,* professor of anatomy at Nebraska University, recently completed a ten day exchange professorship at the university. This was the first exchange professorship arranged between the medical schools of the two universities.

A U. S. Public Health Service grant for $5,000 for the study of the localization and distribution of certain constituents of nerve tissue has been extended until August 1952. Dr. *W. L. Hard,* chairman of the department of anatomy, is in charge of the project.

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Stanford University

Dr. *Paul J. Hanzlik,* professor emeritus of pharmacology and therapeutics, died February 1 after a long illness. He was 66 years old. Dr. Hanzlik had been professor of pharmacology and executive of the department from 1921 until 1950.

Dr. *Frank Mace McFarland,* professor emeritus of histology and anatomy, died February 21, while at his desk at the California Academy of Sciences, where he had been associated since 1934.

On April 4, 11, 18, and 25, the 69th course of Popular Medical lectures were given at Lane Hall. Topics included "New Treatments for Cancer," "Alcoholic Intoxication," "New Treatments for Diseases of the Skin," and "On Growing Up and Growing Old."

The school of medicine is offering 14 post-graduate courses, primarily for the benefit of general practitioners, from September 10 through 14. Registration will be limited in all courses. Each physician who registers will be allowed to take one morning and one afternoon course. Applications should be made to the dean of the school of medicine.

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Temple University

The late Mrs. Frances McCurdy Patterson has bequeathed $40,000 to Temple University Hospital to endow a room in memory of Robert and Mary Patterson.

Dr. *Richard Kern,* head of the department of medicine, spoke at the semi-annual Inter-Agency Seminar on Hospital Administration, which was held under the sponsorship of the Navy department from April 16 through May 4.

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University of Tennessee

The College of Medicine will begin increasing its enrolment from 140 new students a year to 200, beginning with the September quarter. Dr. *T. P. Nash Jr.,* dean of the school of biological sciences and chairman of the committee on admissions, said that 50 new students will be admitted this fall, instead of 35. The 15 additional new applicants have been selected from a group of 84 whose applications were deferred last January.

The increase in admissions follows a $4,800,000 bond authorization measure, and increased operating funds of $400,000 annually approved by Governor Browning and the Tennessee Legislature to increase facilities at the university's medical units. The funds will provide a new chemistry-physiology building and a new unit to provide facilities for postgraduate instruction to physicians and training of medical personnel. In addition, six of the present buildings will be remodeled. The expansion was dictated by the need to increase

the number of physicians in Tennessee, particularly in the rural areas.

To meet the demand for qualified anesthetists, the university is cooperating with John Gaston hospital in offering postgraduate course in anesthesia, the first course beginning in July.

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University of Texas Medical Branch

Charles M. Pomerat, Ph.D., director of the Tissue Culture Laboratory, gave a one man exhibit of drawings, prints and water colors at the George Walter Vincent Smith Art Museum, Springfield, Massachusetts. The show was entitled "Evaluation of a Hobby."

Dr. *Eric Ogden,* professor of physiology at Ohio State University, gave a series of lectures, demonstrations and seminars on "Recent Advances in Cardiovascular Physiology" as guest lecturer in physiology during the first part of March.

The Medical Education committee of the Texas State Medical Association, under the chairmanship of Dr. *Milford Rouse* of Dallas, visited the Medical Branch on March 4, for the purpose of surveying the current educational program and to discuss improvements in postgraduate medical studies for Texas physicians.

Staff members of the Medical Branch scheduled for April 20 a one day course on military preparedness for emergency disaster, at the request of physicians of north Texas.

The National Research Committee on Burns visited the Medical Branch on March 10 to survey the exposure method for treating burns revised under the direction of Dr. *T. G. Blocker Jr.,* professor of plastic and maxillo-facial surgery.

Dr. *Henry Viets,* chairman of the Council on Scientific Sessions of the American Medical Association, was guest speaker at the Medical Branch on March 14, 15, 16, delivering special discussions on "Myasthenia Gravis" and "The Development of Neurology."

The medical branch, in association with the Museum of Natural History of Houston, is participating in a scientific expedition to the Republic of Columbia to collect insect vectors of tropical diseases. Dr. *Ludwik Anigstein* and *Don Micks,* Ph.D., department of preventive medicine and public health, are making the trip.

The laboratory of biochemistry and nutrition has been given a specially designed spectrophotometer for research purposes by Dr. *W. A. Eicher* of Galveston.

Dr. *Henry R. Viets,* librarian of the Boston Medical Library, has accepted appointment as lecturer in neurology and in historical and cultural medicine. Dr. Viets plans to spend a week each semester in Galveston for lectures and conferences.

A fellowship for work in the Tissue Culture laboratory has been established by the Ferris and Florence Smith Foundation for Plastic Surgical Research of Grand Rapids, Michigan. The fellowship is currently being held by Dr. *Jorge Gonzalez Ramirez.*

Chrales H. Townes, Ph.D., of the radiation laboratory of Columbia University, gave a series of lectures and seminars during April on the general subject of micro-wave spectroscopy.

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University of Utah

Negotiations are in progress with the Atomic Energy Commission to provide $100,000 for the construction of radiobiology laboratories in the new medical center.

The U. S. Public Health Service has granted $19,500 for studies on the potential carcinogenicity of the dusts encountered in the uranium mines and processing plants of the region.

Dr. *H. L. Marshall,* formerly professor of public health and preventive medicine, has been appointed director for the Trust Territory, Islands of the Pacific, with headquarters in Hawaii.

Dr. *Mark Nickerson,* formerly of the research faculty, has accepted a post as associate professor of pharmacology at the University of Michigan.

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Vanderbilt University

Dr. *John Youmans,* dean of the school of medicine, received a medal as a chevalier of the French Legion of Honor

for his work with French scientists on nutrition problems.

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University of Virginia

A new department of social and environmental medicine has been established at the university. Dr. *Robert D. Wright,* senior surgeon, U. S. Public Health Service, has been appointed professor and chairman of the department.

Drs. *William Parson,* professor of internal medicine, and *Jesse Beams,* chairman of the physics department, have received a grant of $9,249 by the National Heart Institute for studies on "Ultracentrifugal Analysis of Human Plasma Lipoproteins and their Relationship to Vascular Disease."

Dr. *Grover C. Pitts,* assistant professor of physiology, has received a grant from the National Institute of Health for studies on the "Gross Composition of the Fat-Free Mammalian Body."

The Childrens' Service Center of the university has been approved by the American Association of Psychiatric Clinics for Children as a center for training in child psychiatry and social work.

A conference on the treatment of emotional disorders was sponsored by the department of medicine on March 23 in cooperation with the Mental Hygiene committee, Medical Society of Virginia. The conference was under the direction of Dr. *David C. Wilson,* professor of neurology and psychiatry. Dr. *Jacob Finesinger,* professor of psychiatry, University of Maryland, was guest speaker.

Dr. *E. D. Vere Nicoll,* chief assistant to the orthopedic and fracture departments, St. Bartholomew's hospital, University of London, has been appointed instructor in orthopedics.

Dr. *Desmond R. H. Gourley* has been appointed assistant professor of pharmacology.

Dr. *Robert D. Wright,* professor of social and environmental medicine, has been awarded a fellowship by the World Health Organization to study social medicine and human ecology in Europe. While in Paris, Dr. Wright will represent the United States at the annual meeting of the International Union Against Venereal Disease.

The university has assigned dormitories for 120 students in the department of medicine in buildings immediately adjacent to the medical school and the University hospital.

Dr. *Henry B. Mulholland,* professor of internal medicine, will attend the meeting of the World Health Organization in Geneva, Switzerland, May 7 to 25.

Alumni speakers at the meeting of the University of Virginia Medical Alumni Association in Charlottesville, June 8, will be Dr. *John S. Lawrence,* professor of internal medicine, UCLA, and Rear Admiral *H. Lamont Pugh,* Surgeon General of the United States Navy.

Dr. *Lucius D. Hill, III,* resident on thoracic surgery, University of Virginia hospital, was awarded the John Horsley Memorial Prize at the annual meeting of the Sigma Xi society, for his thesis on "Acute Renal Insufficiency and the Role of Potassium with Treatment by Intestinal Lavage."

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Washington University of St. Louis

Construction was begun in the middle of March on the David P. Wohl Jr. Memorial hospital at the university's Medical Center. The hospital, expected to be completed in the latter part of 1952, will be a ten-story edifice having a maximum of 82 beds and facilities for teaching and research on its ground floors and upper stories. Funds for the construction of the hospital and a new steel bridge approaching it were secured in part from David P. Wohl's father, who contributed $850,000, and in part from the U. S. Public Health Service, to the amount of $325,000. The remainder of the cost of construction, estimated to be over $2,000,000, will be procured from reserves of the school of medicine.

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Wayne University

Mayor Albert E. Cobo and the Detroit Common Council have passed a joint resolution petitioning the state legislature to

provide funds for the construction of a medical science building for the college of medicine. The action followed a warning by Dr. *Gordon H. Scott*, dean of the college, that Michigan has already lost 300 doctors to the armed forces. The present medical student enrolment is 254 with an annual entering class of 68. With the proposed new construction, total enrollment could be raised to 400 with 100 new students entered annually. Last year the legislature allotted $112,000 for the drawing up of plans for the new building. The plans have now been completed and construction bids are being asked.

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West Virginia University

The West Virginia state legislature has passed a bill providing for a tax on soft drinks which will specifically provide for the financing of a four year school of medicine, dentistry and nursing. The bill, as passed, charges the present legislature with completing plans for the construction and maintenance of the school. Action was obtained after a personal plea before the legislature by Governor Okey L. Patteson.

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University of Wisconsin

May 15 to 17, the university is offering a postgraduate course entitled "Review of Some Phases of Internal Medicine and Pediatrics." The course will be directed by Dr. *Ovid O. Meyer*, chairman of the department of medicine, and Dr. *John E. Gonce Jr.*, professor of pediatrics.

A new Intern-Resident dormitory, costing $710,000, will be constructed on campus as a result of action taken by the executive committee of the Board of Regents. The dormitory will house 80 interns and residents and will be self-amortizing over a 30 year period.

A medical school convocation was held on April 23. Dean *Willard L. Sperry*, Memorial Church, Harvard University, spoke on "The Doctor, the Patient, and Society."

Dr. *Carl A. Dragstedt*, chairman of the department of pharmacology, Northwestern University medical school, delivered the annual Charles R. Bardeen Memorial Lectureship address on May 1.

Mr. Kurtis R. Froedtert, Milwaukee industrialist, has given $10,000 to the medical school. The gift, according to Dr. *William S. Middleton*, dean of the school, will be used in research and teaching on heart disease.

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Woman's Medical College

The Woman's Medical College marked the 101st year of its existence on Founder's Day, March 11. The program featured the unveiling of the cornerstone and dedication of the new $700,000 Nurses' residence. The graduation address was given by Miss *Anna D. Wolf*, Director, School of Nursing and Nursing Service, Johns Hopkins hospital.

Dr. *Louise Pearce*, president of the college, is one of five prominent women physicians who received the Elizabeth Blackwell Citation for 1951. The awards were established to commemorate the first woman in the United States to receive a medical degree.

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Yale University

The number of students to be admitted to the school of medicine next fall will be increased from 65 to 80, making it the largest first year class in the history of the school. According to Dr. *C. N. Hugh Long*, dean of the school, this is in accordance with the policy of the Association of American Medical Colleges to train more students to meet the need for physicians without decreasing the quality of their education.

The Grace-New Haven Community hospital, affiliated with the school of medicine, will soon complete a new unit. Construction of this unit has helped make possible the increase in enrollment.

Dr. *A. W. Snoke*, director of the Grace-New Haven Community hospital, spoke at the semi-annual Inter-Agency Seminar on Hospital Administration which was held from April 16 through May 4 under the sponsorship of the Navy department.

General News

Change in Requirements for Internships and Residencies

Since there are no longer any medical schools in this country that are not presently approved, the AMA Council on Medical Education and Hospitals has reviewed its present requirements for internships and residencies. Henceforth, and so long as all medical schools remain approved, "any physician of unquestioned moral and professional integrity, who holds the degree of Doctor of Medicine obtained on the basis of four years of study in an American medical school recognized by one or more of the state boards of medical licensure and who is licensed as a doctor of medicine in the state in which a hospital is located, may be appointed by that hospital, if it considers him to be qualified, to its intern or residency staff without prejudice to its approved status. This action is taken in the belief that it will enable graduates of unapproved medical schools already licensed to practice medicine to improve the quality of their medical care without encouraging the continuation of substandard schools." J.A.M.A. (March 10) 1951.

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World Health Organization

Dr. *M. A. K. Dalgamouni,* director of the leprosy control section, visited Ethiopia during December and January. While he was there he demonstrated the injection of sulfetrone solution and gave instruction in occupational therapy.

Panama has become a member of the World Health Organization. 75 nations have now become full members of the organization and there is one associate member.

A mobile survey team under the direction of Dr. *E. Herndon Hudson* is making a survey in Iraq as the first step in a bejel and syphilis control program to be established there. A building to accommodate a laboratory and clinic for the program is being completed near Baghdad. Strains of typical syphilis spirochetes from Baghdad have been sent by air to Johns Hopkins medical school for comparison with similar strains from the Far East and Latin America and other parts of the world. Later, strains of bejel spirochetes will be sent as well as other treponematoses, such as yaws and pinta.

A new anti-tuberculosis center constructed by the Turkish government for the organization was recently opened in Istanbul. Dr. *Ekrem Hayri Ustundag,* minister of health, attended.

Dr. *M. Abdel Azim Bey,* director of the rural hygiene department of the Egyptian Ministry of Public Health, has recently completed a survey of middle eastern countries for the spread and incidence of bilharziasis. He found infected areas in different parts of Saudi Arabia for the first time in medical history.

More than 250 fellowships to medical and allied personnel throughout the world will be awarded this year. Technical and teaching personnel from WHO member states with at least two years experience in the field in which the fellowship is sought are eligible for the awards. Applications are made through the applicant's government.

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Markle Foundation Grants

Twenty more young medical scientists have been named in the fourth group of "Scholars in Medical Science" appointed by the John and Mary R. Markle Foundation as part of its program to keep young doctors on medical school teaching and research staffs. The grants now total $30,000 each to be distributed equally over a five year period instead of the previous $25,000 each. Beginning July 1, the increase will also apply to the 46 current grants made during the first three years of the program. The funds are paid

in directly to the medical schools and are earmarked for the support of a specific doctor and his research.

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World Medical Association

Dr. *Theodore G. Klumpp* was elected on March 13 to the board of directors of the U. S. committee of the World Medical Association. Approximately 1,500 American doctors belong to the association, which represents 500,000 individual doctors of 40 nations. The association maintains close liaison with the United Nations' World Medical Organization.

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National Tuberculosis Association

The National Tuberculosis Association announced the retirement of *Frederick D. Hopkins,* executive secretary. He is succeeded by *James G. Stone,* director of program development for the last eight years.

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Heart Disease Research

Fifty-one research awards and 36 research fellowships have been given this year by the Life Insurance Medical Research Fund to assist projects in the study of heart disease. The grants total more than $725,000. Important results have been obtained through aid from these grants on the problems of arteriosclerosis, hypertension, rheumatic fever and other fundamental problems in the maintenance of the normal blood flow and the development of heart failure.

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Federal Security Agency—Public Health Service

Public Health Service grants of more than $900,000 were made to various states and inter-state agencies during the current fiscal year for studies related to the prevention and control of water pollution caused by industrial wastes.

Grants of more than $500,000 were made by the Cancer Institute of the National Institutes of Health to improve the cancer training of future physicians and others. The allocations were approved by Dr. *Leonard A. Scheele,* Surgeon General of the Public Health Service.

The Mental Health Institute of the National Institutes of Health has published a new series of five pamphlets on "Careers in Mental Health." These pamphlets describe opportunities, personal qualifications and educational requirements for work in psychiatry, clinical psychology, and related fields. In addition to describing jobs and qualifications, the pamphlets also indicate sources of financial aid for students, including National Institute of Health stipends available to graduate students in the four psychiatric specialities.

The Institute of Mental Health has also announced twenty-seven grants, amounting to more than $220,000, to assist research in the field. The studies will include reports on the effects of high altitudes on flyers, preventive mental hygiene for later maturity, post-operative adjustment of psychosurgical patients, and other projects.

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Emergency Doctor Call System

Medical societies in 329 communities have established night and emergency call systems, according to the board of trustees of the American Medical Association. This represents an increase of 269 such systems since the last survey made by the association in 1948.

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Commission on Chronic Illness

The conference of the Commission on Chronic Illness was held on March 12, 13, 14 at Chicago. The Conference held an opening and closing general session, but the major part of its activities consisted of working groups which discussed the various aspects of their program. It was announced during the conference that a grant of $60,000 had been made to the Hunterdon County, New Jersey, Medical Center by the Commonwealth Fund for a study of the incidence of disabling chronic illness in the rural population.

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Cancer Clinics Proposed

The American Cancer Society has announced plans to increase by 150 percent the number of cancer detection and treatment clinics in the United States. The

society plans to spend $1,000,000 a year for the next five years to stimulate the opening of new clinics. Eventually, it is hoped, there will be one clinic per 100,000 of population, or 900 more clinics than the present number of 609.

The U. S. Public Health Service has granted $1,305,930 to 62 hospitals, universities and other institutions to further research projects in cancer. This amount includes funds given to thirteen centers engaged in cancer chemotherapy studies.

The Clement Cleveland bronze medal for outstanding work during the year in the campaign to control cancer has been awarded to Alfred P. Sloan Jr., chairman of the board of General Motors.

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Air Force School of Aviation Medicine

Academic ranks ranging from research fellow to full professor have been given to 23 professional instructors and research scientists at the Air Force School of Aviation Medicine at Randolph Field, Texas. The titles were bestowed by the Air University in a move designed to adjust the school to the pattern of higher education in the United States. This is the first time that formal rank has been granted to faculty members at the school.

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P.H.S. Communicable Diseases Headquarters

The United States Public Health Service has completed plans for the construction of a new headquarters and research laboratory in Atlanta on ground donated for the purpose by Emory university. The new unit would be used in the study of communicable diseases and would consolidated the activities of the Communicable Disease Center already located in the city. Estimated cost for the project is $12,500,000. Studies proposed would relate to peacetime public health and wartime protection of the civilian population.

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Support for the Hoover Commission

Dr. *Robert L. Johnson,* president of Temple University, has announced the formation of a nation wide committee of doctors to support the recommendations of the bi-partisan Hoover Commission. Dr. *Robert Collier Page,* general medical director of Standard Oil Company of New Jersey, was made chairman of the committee at its organization meeting.

The main objectives of the doctors' committee will be to work for the conservation and fullest use of the nation's supply of doctors, nurses and technicians, and the coordination of federal hospital facilities through a federal Department of Health.

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Pasano Foundation Award for 1951

Drs. *Philip Levine* and *Alexander S. Wiener* have been selected as joint recipients of the Pasano Foundation Award for 1951. They have been honored for their work in the discovery and clinical application of the Rhesus factors in human blood. The foundation was established in 1943 by the Williams & Wilkins Company of Baltimore. It is dedicated to the encouragement of medical research, especially that which has clinical application. The award will be presented on the evening of June 13 in Atlantic City.

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American College of Physicians Elects

Dr. *T. Grier Miller,* professor of medicine at the University of Pennsylvania, was named president-elect of the American College of Physicians at the organization's annual meeting on April 12. He will take office in 1952. Dr. *Maurice C. Pincoffs,* head of the department of medicine at the University of Maryland, president-elect last year, began his administration on the same day. Dr. Pincoffs succeeded Dr. *William S. Middleton,* dean of the department of medicine at the University of Wisconsin.

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Hospitals and Schools Assured Supply of Metals

Steel, copper and aluminum supplies have been set aside for the first time to meet urgent needs in hospital and school construction, according to a recent FSA announcement. For June, over 41,000 short tons of steel, 1,570,000 pounds of

copper and 170,000 pounds of aluminum have been earmarked for such construction needs. Hardship cases, in which essential construction has been delayed or halted because of such shortages, will be considered first.

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National Production Authority Regulation 4

Kenneth Andersen, executive vice president of the Scientific Apparatus Makers association, urges all purchasing agents of organizations which use laboratory instruments, apparatus, and supplies to make full use of National Production Authority Regulation 4 in order to avert a threatened shortage of critical raw materials and components of these devices. The regulation permits organizations to purchase supplies with a priority rating (DO-97) which manufacturers must have in order to maintain their materials for production. Copies of the order can be obtained from the National Production Authority in Washington and from the various field offices of the Department of Commerce.

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A M A Reviews of Medical Films Available

The Committee on Medical Motion Pictures of the American Medical Association has completed the first supplement to the second revised edition of the booklet entitled "Reviews of Medical Motion Pictures." This supplement contains 86 reviews of medical and health films reviewed in *The Journal* of the A.M.A. from December 31, 1949 to January 1, 1951. Each film has been indexed according to subject matter. The purpose of these reviews is to provide a brief description and an evaluation of motion pictures which are available to the medical profession.

Eleven copies have been sent to the dean of each medical school and additional copies are available upon request from the:
Committee on Medical Motion Pictures
Americal Medical Association
535 North Dearborn Street
Chicago 10, Illinois

Rockefeller Foundation Appointments and Grants

Dr. *Allan Gregg* has been named a vice president of the Rockefeller Foundation, effective May 1. For twenty years the director for the medical sciences of the Foundation, Dr. Gregg will continue his study of medical education and the integration of medicine within our social structure.

Dr. *Andrew J. Warren* has been named director of the Foundation's new division of medicine and public health, effective June 1. On May 31, Dr. *George K. Strode,* present director of the International Health division, will retire in accordance with the Foundation's regular age retirement rule. Dr. Strode has been with the Foundation since 1916.

Rockefeller Foundation grants for the first quarter of this year totaled $1,481,718. Grants were dispensed for various projects, ranging from studies in education and conservation of resources to the distribution of educational films in South America. Gifts made for medical purposes included $100,000 to the University of Oregon medical school for a five year study of constitutional medicine, $50,000 to Columbia for studies in biochemistry, $30,000 to Tufts for studies in biochemistry, $45,000 to the University of Wisconsin for research on the metabolism of plant tissues, $42,000 to Columbia for work in immunochemistry, $27,300 to the University of Minnesota to study human genetics, $22,500 to Dalhousie University for studies in psychological factors in pregnancy and childbirth, and $50,000 to the Roscoe B. Jackson Memorial Laboratory, Bar Harbor, Maine, for work on genetic factors of intelligence and emotional variation in mammals.

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Joseph Collins Foundation

Dr. *L. Beverley Chaney,* clinical professor of neurology at the college of physicians and surgeons, Columbia University, has been elected president of the Joseph Collins Foundation. He and the other officers of the foundation will administer a million dollar fund left by the late Dr. *Joseph Collins* at the time of his

death last year. Income from the fund is expected to realize $50,000 annually, the sum being used to provide for the needs of medical students. Plans now call for the establishment of scholarships for fifty students annually. It was Dr. Collins' belief that $1,500 might be considered a fair yearly grant to a deserving student, but he did not make this consideration binding. As a consequence, the fund might eventually cover more students by somewhat reducing the amount given to each. The only other request Dr. Collins made concerning administration of the fund was that first consideration be given graduates of state or small eastern colleges and not those of Yale, Harvard or Princeton.

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Vaccination Requirements for Travelers Published by World Health Organization

The World Health Organization has compiled a list of vaccinations required by 122 countries and territories from travelers coming from abroad. The list indicates the situation as of December 31, 1950.

Copies of this list will be made available, on request, to national health administrations, port and airport health authorities, steamship navigation companies and airlines, and their agents.

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Union Dedicates Health Center

A $1,000,000 health center, named in honor of the late Sidney Hillman, was dedicated on April 14 in New York City by the Amalgamated Clothing Workers union. The center, first of its kind ever to be financed directly from funds of the union members themselves, has reserved $250,000 to carry on a research program in the fields of cardiovascular diseases and arthritis. In order to finance the center, union members will be assessed an additional $10 each on their dues for the first year's operation. The new center will be able to care for an estimated 750 patients a week with provision made for most of the clinical services needed short of important surgical procedures.

Committee of Scientists for Defense

Dr. *Robert F. Loeb,* of the college of physicians and surgeons, Columbia University, was one of 11 scientists named to advise the President and Mobilization Director Charles E. Wilson in matters relating to research and defense. Among the committee's responsibilities will be to advise on progress in defense scientific research problems, and to transmit the views of scientists on defense matters. Others named to the committee include Dr. *Oliver E. Buckley,* chairman of the board of the Bell Telephone laboratories, chairman of the committee; Dr. *Detlev W. Bronk,* president of Johns Hopkins University; Dr. *James B. Conant,* president of Harvard University; Dr. *Lee Dubridge,* president of the California Institute of Technology; and Dr. *Alan Waterman,* director of the National Foundation.

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Institute for Student Exchange

The Institute of International Education has received a grant of $150,000 from the Carnegie Corporation to promote international exchanges of persons during the coming year. The grant will be used to increase and improve existing opportunities for people all over the world to study in the United States and for Americans to go abroad.

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Educational Advisory Council Formed

The National Association of Manufacturers has formed an Educational Advisory Council composed of 23 educators, representing all levels of public and private education, to inform the association on educational problems, the needs of schools, and what industry can do to help solve the problems and supply the needs of the nation's educational system.

The council undertook two projects at their first meeting. The first was a study of what industry can do to help colleges and universities keep their instructional staffs intact even if the draft cuts deeply into student enrollments. The second was to get the NAM to urge manufacturers and businessmen to give high priority to

schools in allocating scarce materials and supplies.

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University of Michigan Pamphlet

The University of Michigan medical school has recently distributed a pamphlet to all high schools and colleges in the state and to all medical schools in the nation. The pamphlet sets forth in a straightforward manner some of the main problems that confront the field of medical education, particularly those concerned with the selection of students, the expansion of facilities, and the costs of maintaining medical schools of high standards. The text of the pamphlet is dignified without being pedantic and the folder itself is planned attractively. While the work could tolerate an expansion of its main premises, particularly with an eye toward its being directed at the general public, it is a good effort and a very important one. The school reports that the pamphlet received favorable press notice from several newspapers in the state. It is well worth reading.

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Nutrition Foundation Grants

Research grants-in-aid totaling $212,700 were approved by the Nutrition Foundation, Inc. at its 10th annual meeting, held in Chicago recently. The funds will be used to finance scientific investigations in the field of nutrition in 21 American schools and medical centers.

CONFERENCE ANNOUNCEMENTS

American College of Surgeons

The last of a series of seven sectional meetings of the American College of Surgeons will be held in Detroit on May 9, 10, 11. Attendance will not be restricted to regional members.

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Seminar in Cardiovascular Diseases

Mount Sinai hospital, Miami Beach, Florida, is sponsoring a seminar in cardiovascular diseases to be held May 23, 24, 25, at Miami Beach. Registration for the seminar will be limited to 200 physicians. Further information may be obtained from the chairman of the seminar committee at the hospital.

American Association on Mental Deficiency

The 75th annual meeting of the American Association on Mental Deficiency will be held in New York from May 23 through May 26.

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International Mental Health Congress

The 4th International Congress on Mental Health will be held in Mexico City the week of December 11. Before the congress convenes, groups of European and Latin American mental health experts will visit most major American cities to conduct short seminars in universities, medical schools and public centers.

Book News

Current Therapy, 1951—Latest Approved Methods of Treatment for the Practicing Physician

Howard F. Conn, M.D., Editor. Consulting Editors: Drs. M. Edward Davis, Vincent J. Derbes, Garfield G. Duncan, Hugh J. Jewett, William J. Kerr, Perrin H. Long, H. Houston Merritt, Paul A. O'Leary, Walter L. Palmer, Hobart A. Reimann, Cyrus C. Sturgis, Robert H. Williams. W. B. Saunders Company. Philadelphia and London. 1951. 699 pp. $10.00.

The number of contributors to this volume covers 11 pages. They were chosen by the editors because of special competence in their field of interest. It is certainly impressive that the whole of medical therapy could be covered so adequately in one volume. Discussions are complete but not verbose. Detail is given where indicated but diagnosis is not discussed unless it is an integral part of the therapy.

The usefulness of the height-weight tables, page 262-3, in the article of "Diabetes Mellitus" may be questioned. This table is based on the heights and weights of 221,819 men and 136,504 women, taken in 1912. It shows that a man six feet tall can or "should" weigh 161 lbs. at 20 years of age but at 55 years he may weigh 184. Which simply means that men gain, on average, 23 pounds over 35 years. It is not necessarily a good thing that their weight *does* increase, especially for a diabetic. A 6-foot man age 40 can weigh 180, while a 6-foot 1-inch man is listed at 186. This preciseness is unnecessary. A more sensible table would list a normal weight *range*, to take account of such factors as bony structure and other constitutional differences.

The typography adds to the clarity and usefullness. This volume differs from the 1950 edition in that 49 new contributors have been added, 86 of the therapies are "new" and many have been changed. More than one "method" of therapy is given where authorities differ. The content is divided into 15 logical sections, plus a "Roster of Drugs" (8 pages), dosages and conversion factors, tables for making percentage solutions, and a 34 page index.

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Medicine of the Year

John B. Youmans, M.D., dean, Vanderbilt University School of Medicine, Editorial Director; Hugh J. Morgan, M.D., professor of medicine, Vanderbilt University, Internal Medicine; Franklin G. Ebaugh, M.D., professor of psychiatry, University of Colorado, Psychiatry; Frank Whitacre, M.D., professor of obstetrics and gynecology, University of Tennessee, Obstetrics and Gynecology; Mitchell I. Rubin, M.D., professor of pediatrics, University of Buffalo, Pediatrics; Warren H. Cole, M.D., professor of surgery, University of Illinois, General Surgery; and 17 other contributors. J. B. Lippincott Company. Philadelphia and London. 1951. 298 pp. $5.00.

Two hundred sixty-one pages of text plus extensive author and subject indices. Covers the recent advances in all fields of medicine very adequately. The book is noteworthy too for its typographical presentation, which is a definite contribution to its readability.

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Surgical Forum

Proceedings of the Forum Sessions, 36th Clinical Congress of the American College of Surgeons; Boston, Massachusetts — October 1950. Surgical Forum committee: Chairman—Owen H. Wangensteen, M.D., F.A.C.S.; Warren H. Cole, M.D., F.A.C.S.; Robert E. Gross, M.D., F.A.C.S.; Michael L. Mason, M.D., F.A.C.S.; Carl A. Moyer, M.D., F.A.C.S.; I. S. Ravdin, M.D., F.A.C.S. 665 pp., 260 figures, 6 tables. Philadelphia and London. W. B. Saunders Company. 1951. $10.00.

All the papers presented at the 36th Clinical Congress of the ACS. There are 264 contributors, each having been asked to limit himself to 3,000 words, besides 129 listed as *papers by abstract*. It is a remarkable volume. Of particular importance is the fact that the younger people in the field have been given such a good opportunity to be heard and read.

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Introduction to Surgery

Virginia Kneeland Frantz, M.D. Associate professor of surgery, Columbia University, and Harold Dortic Harvey, M.D., Assistant professor of surgery, Columbia University. Oxford University Press. New York. 233 pp. $2.75.

Although a small volume, this book provides an excellent introduction to the basic problems of surgery. This second edition has been written after four classes of students at Columbia University have had a chance to "try out" the 1946 edition, and the developments of the past few years have required addition of a chapter, "The New Surgery", plus other revisions.

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A Synopsis of Surgical Anatomy

Alexander Lee McGregor, M.Ch. (Edin.), F.R.C.S. (Eng.). Senior Surgeon, Johannesburg General Hospital. Lecturer in Surgery, University of the Witwatersrand. 7th edition. 746 Illustrations by Dr. E. A. Thomas. The Williams & Wilkins Company. Baltimore. 738 pp. and index. 1950. $6.50.

"McGregor" is a small classic known to a world-wide student audience. This 7th edition

is revised and the chapters on transthoracic and blood vessel surgery are new. The section of surgery of the sympathetic nervous system has been changed and a section added dealing with cervico-brachial syndrome. The illustrations (averaging more than one to a page) are diagrammatic but greatly clarify the text.

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Cornell Conferences on Therapy—Volume 4

Harry Gold, M.D. Managing Editor. The Macmillan Company. 1951. 342 pp. $3.50.

An excellently presented account of conferences arranged at the Cornell University Medical School—New York Hospital. The proceedings are recorded as they occurred, in lively interchange between the participants, making for easy and interesting reading. Designed for practitioners and students, the reports do not pretend to be comprehensive; rather they form illuminating and worthy commentaries on the fields which they discuss. Topics included in this volume range from household poisonings through myxedema, neurosyphilis and hypertension to drug addiction, etc.

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Diabetes Mellitus—Principles and Treatment

Garfield G. Duncan, M.D. Clinical Professor of Medicine, Jefferson Medical College. Director of Medical Division, Pennsylvania Hospital and the Benjamin Franklin Clinic. 31 figures and 40 tables. 289 pp. W. B. Saunders Company. Philadelphia and London. 1951. $5.75.

The objectives of this volume are: (1) to assemble current principles in the understanding of and treatment for diabetes; (2) to present a simplified outline of therapy. The book accomplishes both aims very well. The style of presentation is especially helpful to the uninitiated. Valuable for teacher and student.

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Diabetes Guide Book—For the Physician

Prepared by the Committee on Education of the American Diabetes Association. 11 W. 42nd Street, New York 18, New York. 79 pp. (5 x 6⅜ inches). 1950.

A minimal, but quite complete treatment of the subject. Presented in outlined, simplified form. Excellent.

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A Text-Book of X-Ray Diagnosis

By British authors in four volumes—SECOND EDITION. Edited by: S. Cochrane Shanks, M.D., F.R.C.P., F.F.R., Director, X-Ray Diagnostic Department, University College Hospital, London; and Peter Kerley, M.D., F.R.C.P., F.F.R., D.M.R.E., Director, X-Ray Department, Westminister Hospital; Radiologist, Royal Chest Hospital, London. VOLUME II. 702 pages with 605 illustrations. Philadelphia and London: W. B. Saunders Company, 1951. Price $15.00.

Ten years have elapsed since publication of the first edition. This second edition is enlarged and illustrations are increased; their quality is excellent. Frequent line-drawings and diagrams clarify the film reproductions. The text is well written in a lucid style. The four volume series is divided into: (1) Head and Neck, (2) Chest, (3) Abdomen, (4) Bones and Joints. This, the second volume, has two parts: (1) Cardio-vascular and (2) Respiratory. There are 17 contributors and more than 14 pages of bibliography.

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Parasitic Infections in Man

Harry Most, M.D., Editor. Symposium held at the New York Academy of Medicine, March 15 and 16, 1949. Columbia University Press. 1951. 229 pp. $4.50.

A series of monographs on various aspects of the problems related to the incidence, diagnosis and treatment of parasitic infections. The introductory paper, by Paul F. Russell of the Rockefeller Foundation gives a succinct picture of the startling prevalence of infections of this type. Reference bibliographies included after each monograph.

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Eye Manifestations of Internal Diseases (Medical Ophthalmology)

I. S. Tassman, M.D., associate professor of Ophthalmology, Graduate School of Medicine, University of Pennsylvania. 279 illustrations, 25 in color. 3rd edition. The C. V. Mosby Company. 1951. 642 pp. and index. $12.00.

This is a now standard volume in the field. It shows clearly how the eye can indicate disease and disability which has its main focus elsewhere in the body. The presentation follows the pattern of the previous editions and several conditions are newly described. Every internist should be acquainted with this book.

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An Introduction to Universal Serologic Reaction in Health and Disease

Reuben L. Kahn, D.Sc. University of Michigan Medical School and Hospital, Ann Arbor, Michigan. The Commonwealth Fund, New York. Oxford University Press, Geoffrey Cumberlege, London. 155 pp. and index. 1951. $3.50.

Stimulated by "false positive" reactions to serodiagnostic tests, Dr. Kahn has studied in great detail controlled serologic reactions with lipid antigen. His hypothesis is that "certain lipids are liberated in the normal course of tissue wear and tear" and act as antigens, producing a "universal serologic reaction." This volume studies the extent of the precipitation patterns in animals, normal humans, and in syphilis, yaws, leprosy, malaria, etc. Dr. Kahn hopes other laboratories will examine and amplify his findings.

Industrial Health and Medical Programs

Statements, tables and charts selected and compiled by Margaret C. Klein, Margaret F. McKiever, Walter J. Lear, M.D. Public Health Service Publication No. 15. Federal Security Agency, division of Industrial Hygiene. Washington, D. C. September 1950. $1.00.

A comprehensive reference book. Two hundred sixty books and publications were used as a source material providing: (1) background information (industry and the working population); (2) plant health and medical services; (3) general information regarding medical care plans, government and other agency services.

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An Introduction to the Study of Viruses

Kenneth M. Smith, F.R.S. Pitman Publishing Company. 1950. 106 pp. $2.50.

A compact, well-indexed survey of the study of viruses, describing methods of study and research, transmission and spread of virus infections. The book contains excellent illustrations, mostly microphotographs, and a convenient and useful bibliography. The first volume in the Pitman *Microbiology* series.

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Psychiatric Aspects of Juvenile Delinquency

Lucien Bovet, M.D. Consultant in mental health, World Health Organization. Also available in French. World Health Organization. 1951. 90 pp. $1.00.

A study prepared on behalf of the World Health Organization as a contribution to the United Nations program for the prevention of crime and treatment of offenders. One of a series of monographs on various aspects of health being issued by WHO. The *Summary and General Conclusions*, beginning on page 79, is excellent.

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The Doctor—His Career—His Business—His Human Relations

Stanley R. Truman, M.D. The Williams & Wilkins Company. 151 pp. 1951. $3.00.

A readable informal discussion of the many problems that confront the young physician about to go into practice. The author writes from personal experience of long standing and with much sympathy. The chapter entitled *Your Public Relations—Do They Show* should be of special interest.

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A History of Nursing

Gladys Selles, Ph. D., R. N. and C. J. Nuesse, Ph. D., assistant professor of sociology, The Catholic University of America. 2nd edition. C. V. Mosby Company. 1951. 439 pp. $3.75.

The book links the history of the profession with the corresponding periods of world social history. Revised and brought up to date in the contemporary period. Intended for use in schools of nursing.

Trends in Gerontology

Nation W. Shock. Chief, section on gerontology, National Heart Institute, National Institutes of Health, and the Baltimore City Hospitals. Stanford University Press. 1951. 153 pp. $2.50.

A lucidly written attempt to analyze the entire field of gerontology and sum up the work that has gone on in its four related fields of physiology, psychology, pathology and socioeconomics. The author recommends a National Institute of Gerontology to coordinate and give force and direction to the work being done in the field.

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A Classified Bibliography of Gerontology and Geriatrics

Nathan W. Shock. Stanford University Press. 1951. 599 pp. $15.00.

The companion volume to *Trends in Gerontology*. The bibliography proper consists of 485 closely printed pages arranged according to subject, no list containing more than 150 items. There is a compendious list of journal abbreviations and an extensive index.

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The Bases of Human Behavior—A Biologic Approach to Psychiatry

Leon J. Saul, M.D. Professor of Clinical Psychiatry, University of Pennsylvania School of Medicine; Psychiatric Consultant, Swarthmore College; Lecturer, Bryn Mawr College. J. B. Lippincott Company. 1951. 146 pp. $4.00.

Written to fill the need for a text in the teaching of dynamic psychiatry to first year students, the book expresses the author's ideas with simplicity and clarity. Dr. Saul attempts to demonstrate the relationship and integration of psychology and biology.

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Dimensional Analysis for Students of Medicine

Harold A. Abramson, M.D. Assistant clinical professor of physiology, Columbia University. The Josiah Macy Jr. Foundation. New York. 1950. 41 pp. $1.00 for single, lower prices for quantity orders.

"Dimensional analysis takes abstruse physical terms and defines them by means of the dimensions, mass, length and time." This provides a common sense approach to physics, physiology and biochemistry. It is Dr. Abramson's hope that this will provide a common language useful to both the 'pure scientist' and the psychotherapist."

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Cancer As I See It

Henry W. Abelmann, M.D. Philosophical Library. 1951. 100 pp. $2.75.

This short book is a tract in support of the author's belief that cancer is a germ-virus induced disease.

The Neuroses

Walter C. Alvarez, M.D. Professor of Medicine, Emeritus, Mayo Foundation, University of Minnesota. W. B. Saunders Company. 1951. 667 pp. $10.00.

A discussion of the neuroses and the minor psychoses by a non-psychiatrist with long practice in medicine for the use of other non-psychiatrists who feel a need for some kind of knowledge in methods of treating patients with functional disorders. The book is remarkably free of the trade talk of psychiatry, and consists mostly of practical observations made from long experience with patients. Chapters deal with all phases of the problem in hand, from first recognition of the nervous patient, through the possible list of disorders, to advice on what help a non-psychiatrist can be for these people.

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The Mechanisms of Cell Division

Edited by M. J. Kopac. Annals of the New York Academy of Sciences, 2 East 63rd St., New York 21, New York. Volume 51, article 8. March 1951. 18 contributors. Illustrated. 260 pp. $3.50.

A thorough treatment of the details of, and factors affecting, cell division, (micrurgical studies, hydrostatic pressure, centrifuging, effects of certain drugs, radiation, etc.) The volume is completed by an inquiry into the probable ultrastructures involved in cell division.

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Public Health Laws of the City of Pittsburgh

Edited by James C. Kuhn Jr. and David Stahl. School of Law, University of Pittsburgh. 1950. 1038 pp. $5.00.

This volume clarifies and codifies all state laws and city ordinances pertaining to the Pittsburgh department of public health. It is being used as the basis for a revision of the public health laws of the entire state. A model document, the book is remarkably clear in style, content, and typography.

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40th Anniversary Year Book

National Urban League. 1133 Broadway, New York 10, New York. 1950. 128 pp.

This book, entitled ". . . and the Pursuit of Happiness," is distributed free by the National Urban League to commemorate the work of that organization in attempting to achieve "true teamwork in the building of a more unified nation."

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The New Physics

Sir C. V. Raman. Philosophical Library. 1951. 144 pp. $3.75.

Subtitled *Talks on Aspects of Science*, this little volume consists of a series of lectures the author originally delivered as radio addresses in India. Though his treatment of the field is popular, it is quite thorough.

Pioneer Doctor

Lewis J. Moorman, M.D. University of Oklahoma Press. 1951. 252 pp. $3.75.

An account of the professional life of a distinguished physician, educator, editor and authority on tuberculosis who began his practice of medicine at the turn of the century as a horse and buggy doctor on the plains. The book is well written and contains scores of absorbing anecdotes of the difficulties and rewards Dr. Moorman has encountered in his long career. His approach is candid and the text makes for "good reading." Of particular interest to readers of the JOURNAL will be the chapter on medical education, which presents a thoughtful discussion of the problems facing the medical educator today.

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Borderlands of Science

Alfred Still. Philosophical Library. 1950. 424 pp. $3.75.

The author, writing in a lucid and provocative style, compares scientist and mystic. He explores the phenomena of the divining rod, levitation, poltergeist evidence and telekinesis, body, mind and memory, and allied topics.

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Community Health Educator's Compendium of Knowledge

Clair E. Turner, A.M., Ed. M., D.Sc., Dr. P.H. The C. V. Mosby Company. 1951. 266 pp. $3.00.

A handbook to help the health educator check principles and procedures in action for health promotion. Contains in concise and useful form a great deal of information in regard to the availability and use of various media.

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Paracelsus—Magic Into Science

Henry M. Pachter. Henry Schuman. 1951. 359 pp. $4.00.

A beautifully printed and illustrated life of the great controversial figure standing at the fountainhead of science. The author is intent on the romance of the figure, but manages to justify himself in the process.

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Health and Human Relations in Germany

Reporting of a Conference on Problems of Health and Human Relations in Germany held at Princeton, New Jersey, on June 26-30, 1950. The Josiah Macy Jr. Foundation. 205 pp. $1.00.

The preceedings of a conference which met under the auspices of the Josiah Macy Jr. Foundation and with full permission of the State Department, to discuss and attempt to formulate some answers to the question of why the German nation has developed aggressive attitudes towards its neighbors. The members of the conference have attempted to consider the problem in the light of the entire nature of Western Civilization.

On the Origin of Species by Means of Natural Selection

Charles Darwin. With a foreword by Dr. C. D. Darlington, F. R. S. Philosophical Library. 426 pp. $3.75.

A reprint of the first edition, published in 1859, of this famous and controversial text. All other reprints of the work have been made from partially expurgated editions. The format is easy to handle but is printed in a rather difficult body type.

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English-German Medical Dictionary

Compiled by F. S. Schoenewald, M.D. The Blakiston Company. Philadelphia. 1951. 242 pp. $6.00.

Dr. Schoenewald escaped from Nazi Germany to England where he devoted his time to the compilation of this dictionary and its companion volume, German-English dictionary. Basing his work on the close inspection of 30,000 pages of medical literature in the English language, the doctor attempts to show the fine graduations of meaning words can have by giving examples of their usage. Consequently the book is a phrase dictionary, considerably more useful for real understanding of any language.

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From the Life of a Researcher

William Weber Coblentz. Philosophical Library. 1951. 233 pp. $4.75.

Reminiscences from childhood to almost the present time by a man who has devoted his life to research problems, principally in thermal radiation. Leisurely narration; indeed, the earlier chapters are almost chatty. There is a section on Dr. Coblentz's personal experiences with psychic phenomena.

The following books have been received in our office since publication of our last issue. As space permits, those with the greatest interest to our readers will be reviewed.

Handbook of Pediatric Medical Emergencies

Adolph G. DeSanctis, M.D., Professor of pediatrics, Post-Graduate Medical School, New York University-Bellevue Medical Center, and Charles Varga, M.D., Instructor in pediatrics, Post-Graduate Medical School, New York University-Bellevue Medical Center. The C. V. Mosby Company. St. Louis. 1951. With 51 illustrations. 284 pp. $5.00.

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Clinical Parasitology—5th Edition

Charles Franklin Craig, M.D., and Ernest Carroll Faust, PhD., with a chapter on "Control of Medically Important Arthropods" by Albert Miller, Ph.D. Thoroughly revised, with 326 engravings and 6 colored plates. Lea & Febiger. Philadelphia. 1951. 1032 pp. $12.00.

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Annual Review of Physiology

Victor E. Hall, editor. Jefferson M. Crismon and Arthur C. Giese, associate editors. Annual Reviews, Inc. and the American Physiological Society. Stanford, California. 1951. 457 pp. $6.00.

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Le Mal D'Hippocrate

Charles Claoue, Docteur en Medicine. Les Libraires Non Conformistes et Les Amis de la Liberte. Paris. 1950. 192 pp.

Textbook of Physiology and Biochemistry

George H. Bell, M.D., professor of physiology, University of St. Andrews, J. Norman Davidson, M.D., D. Sc., Gardiner professor of physiological chemistry, University of Glasgow, and Harold Scarborough, Ph.D., professor of medicine in the Welsh National School of Medicine, University of Wales. The Williams and Wilkins Company. Baltimore. 1950. 918 pp. $9.00.

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Immunology—3rd Edition

Noble Pierce Sherwood, Ph.D., M.D., F.A.C.P., Professor of Bacteriology, University of Kansas. The C. V. Mosby Company. St. Louis. 1951. Illustrated. 731 pp. $8.00.

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Patterns of Disease on a Basis of Physiologic Pathology

Frank L. Apperly, MA., M.D., D.Sc., F.R.C.P., Professor of pathology, Medical College of Virginia. J. B. Lippincott Company. Philadelphia. 1951. 50 figures and 37 charts. 456 pp. $8.00.

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Wheeler and Jack's Handbook of Medicine 11th Edition

Revised by Robert Coope, M.D., B.Sc., F.R.C.P. The Williams and Wilkins Company. Baltimore. 1950. 648 pp. $5.00.

The Student's Handbook of Surgical Operations

Sir Frederick Treves, Bart. G.C.V.O., C.B., LL.D., F.R.C.S. 9th edition revised by Sir Cecil Wakeley, K.B.E., C.B., D.Sc., F.R.C.S., F.R.S.E., F.A.C.S. (Hon.), F.R.A.C.S. Fellow of King's College, London. Paul E. Hoeber, Inc. Medical Book Department of Harper & Brothers. New York. 9th edition. 1951. 580 pp. $5.50.

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The Collected Papers of Adolph Meyer Volume II—Psychiatry

Edited by Eunice Winters. With an introduction by Sir David K. Henderson, M.D., F.R.C.P. The Johns Hopkins Press. Baltimore. 1951. 674 pp. 4 volume set. $30.00.

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Electroencephalography in Clinical Practice

Robert S. Schwab, M.D., Associate in neurology, Harvard Medical School. W. B. Saunders Company. Philadelphia and London. Illustrated. 1951. 195 pp. $6.50.

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The Microkaryocytes—The Fourth Corpuscles and Their Functions

K. G. Khorozian, M.D. Meador Publishing Company. Boston. 1951. 969 pp. $12.00.

Human Physiology

Bernardo A. Houssay, M.D., Professor of physiology, Director of the Institute of Biology and Experimental Medicine, Buenos Aires, and associates. Translated by Juan T. Lewis, M.D., and Olive T. Lewis. Foreword by Herbert M. Evans, M.D. McGraw-Hill Book Company, Inc. New York. 1951. 1118 pp. $14.00.

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Evolution Emerging

William King Gregory. A collaborative work of the American Museum of Natural History and Columbia University. The Macmillan Company. New York. 1951. 2 volumes, Volume 1 is text, Volume 2, illustrations. 1749 pp. $20.00—boxed set.

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Johannes Kepler: Life and Letters

Carola Baumgardt, with an introduction by Albert Einstein. Philosophical Library. New York. 1951. 209 pp. $3.75.

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A Few Buttons Missing—The Case Book of a Psychiatrist

James T. Fisher, M.D. and Lowell S. Hawley. L. B. Lippincott Company. Philadelphia. 1951. 282 pp. $3.50.

NEW BOOKS AND NEW EDITIONS

Goldberger—Heart Disease: Its Diagnosis and Treatment

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Associate Attending Physician, Montefiore Hospital, New York; Cardiologist and Attending Physician, Lincoln Hospital, New York; Lecturer in Medicine, Columbia University

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by FRANK L. APPERLY, M.A., M.D. (*Oxford*), D.Sc. (*Melbourne*), F.R.C.P. (*London*), *Professor of Pathology, Medical College of Virginia, Richmond, Va.*

Designed to provide textbook material for a course in pathology, directly applicable to the field of clinical medicine. Dr. Apperly's book is an innovation for, while soundly based in pathology, it describes the compensatory mechanisms adopted by the body in its resistance to disease and, in a step-by-step manner, the physiologic manifestations of the various disease processes resulting in morbid anatomy. The material presented in PATTERNS OF DISEASE is the outgrowth of the lectures on pathology in the Medical College of Virginia, which are supplemented by gross and microscopic study of preserved and fresh specimens of diseased tissue and by numerous blackboard drawings. The latter form the basis for the illustrations in the book.

472 Pages. Illustrated with drawings, charts and tables. $8.00.

ESSENTIALS of PHARMACOLOGY

by FRANCES K. OLDHAM, Ph.D., M.D.; FREMONT E. KELSEY, Ph.D., *and* EUGENE M. K. GEILING, Ph.D., M.D., *all of the Department of Pharmacology, University of Chicago.*

New—2nd Edition. This versatile and authoritative book presents briefly and concisely the essential information about the various drugs of current medical importance. Each chapter presents a discussion of a group of drugs possessing similar activity and provides their structural formulas, a list of official preparations and a selected bibliography. The preparations are compiled from the U.S.P. XIV, B.P. 1948 and N.N.R. 1951. The text follows the practice of using the English names for drugs and the metric system for dosages.

In Active Preparation. Ready July 1951.

J. B. LIPPINCOTT COMPANY

East Washington Square, Philadelphia 5, Pa.

The Journal of

MEDICAL EDUCATION

IN TWO PARTS
(Part Two)

PUBLISHED BY

THE CRITICAL CATALOGING OF MEDICAL FILMS

VOL. 26 MAY, 1951 No. 3

Published bimonthly, January, March, May, July, September and November, at 185 North Wabash Avenue, Chicago 1, Illinois, by the Association of American Medical Colleges.
Subscription: Domestic $5.00 per year. Foreign $6.00 per year.

Entered as second class matter January 17, 1930, at the Post Office at Chicago, Illinois, under the Act of March 3, 1879.

THE CRITICAL CATALOGING OF MEDICAL FILMS*

ADOLF NICHTENHAUSER, M.D. and DAVID S. RUHE, M.D.
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The medical teacher who wishes to use motion pictures as an effective part of his teaching program is faced with several difficult problems. There is a vast number of films available; their quality and their suitability for one audience or another are extremely varied; their purposes are largely unstated and often unknown. The teacher's problem of determining whether a given film will meet his specific needs, in whole or in part, is not always solved by the existing information material. This problem would be considerably eased by the existence of a reasonably comprehensive critical catalog of existing medical films. Such a catalog should not only supply this much needed information but also seek to sharpen the teacher's appreciation and knowledge of the motion picture as a language of communication. Critical cataloging should not be considered as an isolated task, but as a fundamental part of a broader program aimed at realizing the potentialities of the motion picture as a means of medical education and research.

Since the summer of 1950, the Medical Film Institute of the Association of American Medical Colleges has been engaged in the preparation of such a catalog, under a grant from the Rockefeller Foundation. What has been done so far is merely the beginning of a complex undertaking; its methods and results have yet to prove their value in order to find the acceptance and recognition which alone can make possible the continuation of this work. It is the purpose of this article to set forth the need for critical cataloging, its objectives and methods, and to report on the progress so far made.

THE NEED FOR CRITICAL CATALOGING

Since their beginnings motion pictures have been more extensively employed in medicine than in any other field of science. No one can count the thousands of medical films made over the past 50 years. Their rate of production continues high. The total of medical subject matter which has been put on film is extraordinary. By and large, medical films have become accepted; there is hardly a physician who would deny that they can fulfill some useful function in the vast field of medicine. The mere fact that hundreds of films are made every year proves that medical authors, organizations and agencies recognize the value of the motion picture as a medium of communication and that a demand for them exists.

*The term, "critical cataloging," as used in this article, signifies the principles and methods of preparing critical reviews of medical films for the purpose of assembling a comprehensive catalog of such films.

Yet the fact that motion pictures are produced in great quantity does not necessarily mean that in all of them the film medium is employed in an accomplished fashion. As a matter of fact, the progress of medical films has been slow and tortuous. Technological developments during the past 25 years have greatly facilitated medical film making, expanded the range of objects that can be filmed, and improved the photographic aspects proper. Nevertheless, in relatively few instances only have medical films fully utilized the creative and technical potentialities of the medium. The basic patterns of most medical films have remained unchanged through decades. Some of these conventional patterns are ideally suited for their purposes, some utilize the film medium in a narrow way only, and others misconceive its nature, forcing upon the films the structure and forms of verbal teaching. Large sums are expended year after year in the production of films which are poorly conceived and executed, and this is equally true of $50,000 productions and of films costing $200.

Although the use of medical films is wide-spread, it is irregular and has failed so far to make the motion picture, within its limits, a standard means of medical education. This is a result of the lack of sufficient film information, of the inadequacies of many films, and of the frequent failure of film users to understand the specific functions of motion pictures. Inaccessibility of projectors and film prints is also a primary factor in many countries in the world, though not in the United States.

There is little doubt that critical cataloging of medical films can make an important contribution to the improvement of film use as well as of production patterns. In medical films—as in any domain of knowledge—cataloging is a prerequisite of methodical work, and criticism a prerequisite of progress. Published criticism of medical films is of rather recent date, and it has not yet embraced all the aspects that need consideration if the medium is to be advanced.

The establishment of critical cataloging is a task large in volume and difficult in execution. Its chief aims are to make it easier and less time-consuming for the teacher to find films he can use; to help him toward a better understanding of the nature and functions of motion pictures so that he can apply them with greater success; and to improve the patterns of medical film making. In order to achieve such aims, critical cataloging must not only provide sufficient descriptive film information and reliable appraisals of the scientific aspects of the films. It must also examine their purposes and objectives; the way in which the subject matter has been treated; how the film medium has been used to implement the objectives; and what and how well audiences can learn from the films. To make critical cataloging valid, a group approach rather than an individualistic one is needed. Film analysis demands the collaboration of subject-matter experts, teachers and film specialists; and the examination of the teaching value of the films requires participation of sample audiences.

Critical cataloging alone cannot solve all the problems of medical films. But it can change their climate and improve their growth.

THE EXISTING FILMS AND THEIR USE

The Number of Films

Technical medical films listed and distributed in one form or another in the United States may be estimated to number between 1500 and 2000. This figure does not consider still existing older films no longer carried in current lists and catalogs; many of these may be of permanent medico-historical interest. More important, the figure excludes the films produced by physicians, scientists and institutions on which no information has been made public. It is possible that the number of these films exceeds that of the listed films. Furthermore, the above figure takes into account neither foreign medical films not in distribution here nor the hundreds of films in the related fields of dentistry, veterinary medicine, biology, psychology, nursing, and others. Finally, there are some 300 to 400 health education and related films in current distribution.

The number of the listed films alone gives an idea of the magnitude of the task of critical cataloging, a task mounting from year to year on account of the high rate of new production. This task is not only considerable in size but also complex in nature because of the prevailing characteristics of medical films.

The Purpose of Medical Films

As to purpose, most medical films originate in the desire of their authors to present their own work: their findings, methods, cases, investigative and therapeutic techniques and skills, their concepts and views. Of necessity, most of these films are specialistic in content and their approach is usually personal, inasmuch as they are limited to the authors' own contributions. A far smaller yet numerically considerable proportion consists of films which attempt to present the established or accepted knowledge of a subject or of some aspect of a subject.

The scope of medical films may be narrow or wide. Their subjects may be basic or, more frequently, specialized. And their function may be to illustrate, demonstrate, record, report, instruct, orient, or motivate. Within this wide and varied spectrum, medical films represent many shades of authority, objectivity and significance. Thus, as far as their objectives are concerned, medical films are, on the whole, no different from the medical literature. The differences lie in the fact that these objectives are vague or ill-defined in a great many films and, even more frequently, that they are vitiated by weaknesses in the treatment, organization and presentation of the material.

Production Patterns

Most films are planned and produced by their authors, either alone or, more often, with the help of cameramen, of whom only a few have had an opportunity to learn the specific and complex skills of motion picture design and construction. As a result, such films are in most cases merely camera records of phenomena or actions. This may be sufficient for some purposes. However, if the subject matter is of a complex nature, the lack of analytical treatment or the inept visual organization may limit the clarity and effectiveness of the films.

An increasing percentage of the films is now produced with the aid of individual film professionals, medical film producers or non-theatrical production companies. Although their participation has raised the standards of visual presentation, it has hardly begun to solve the specific problems inherent in the conception and organization of films for purposes of medical teaching and communication. There are great differences in skill and creativeness among professional film workers. Although some are proficient, the films of others suffer from graver abuses and misconceptions of the film medium than those of many a medical film amateur. Yet even great expertness in film technique does not always suffice, unless it is combined with an understanding of medicine and familiarity with educational techniques. It should be noted in this context that American educational films, and with them medical films, have always been decidedly influenced by the strong tradition of the textbook in this country, with the result that film authors and film makers have tended to conceive motion pictures as the screen emulation of a textbook lesson or chapter. Hence there are many medical films which attempt to cover too wide a scope, are crammed with material, rely too much on verbal information, and, in short, tend to displace the teacher instead of helping him.

Only as the methods of medical teaching and learning are perfected and as they are applied to the shaping of films will these become fully adapted functional tools of instruction. On the other hand, it is likely that films themselves will be able to make an important and perhaps unique contribution to the improvement of medical educational techniques, as they have already done to a small extent.

Motion Pictures as an Instrument of Research

A special application of motion pictures in medicine is their use as a tool of investigation. This use ranges from simple camera recordings to cinematographic methods of extreme technical difficulty. The resulting footage serves not only the purposes of scientific analysis but sometimes also provides splendid raw material for teaching films. However, many of the research films brought into circulation are not adequately edited for teaching purposes and therefore need a considerable amount of interpretation which in some cases only the author himself can give.

Present Patterns of Film Use

The methodical employment of films in medical schools is still very far from general. It is, by and large, spasmodic, personal, unorganized. Relatively few teachers have assembled over the years a repertoire of films which they use in an integrated fashion. Some of these teachers have made their own films to implement their personal teaching methods. There is now considerable use of films in hospitals, especially for the information and training of house staffs. Outside of the colleges and hospitals, films are largely used on an informal basis, such as at conventions or county society meetings.

A very large segment of film use consists in the showing of specialist films to specialist audiences whose familiarity with the subjects helps them to make

up for the frequent deficiencies of the films. Yet in their additional function as teachers, some of these specialists show to undergraduate students films they have found valuable to themselves, not fully realizing that a less learned audience cannot derive equal benefit from them. Certain teachers regard motion pictures as dispensable ornaments, if not an outright waste of time; many of these men are honestly unaware of the fact that often a film—even an amateurish one—can do a far more effective job than the most eloquent verbal exposition. Other teachers are willing to accept films, using them as they come and trying hard to get the best out of them. On the whole, the medical teaching profession appears to be genuinely trying to find approaches to the use of motion pictures but is often confused and uncertain, without knowing the specific reasons.

THE EXISTING INFORMATION ON MEDICAL FILMS

The existing catalogs and lists of medical and related films fill a good part of a filing cabinet drawer, but the information they provide is detailed and critical to a limited extent only. The need for an evaluative approach to medical films is not new. It has grown with the rising production rate, and several attempts have been made to meet it.

The List of the American College of Surgeons

The American College of Surgeons took an active interest in medical films as early as the middle 1920's. At that time, its Committee on Medical Motion Picture Films initiated the production of teaching films, which, however, was abandoned a few years later. In addition, the College began to review films in order to determine those of value and to assemble film programs for its annual meetings. It was not until 1935, however, that the College first issued a list of "approved" motion pictures which since then has been published annually.[1] The College approves films not only in its own field of surgery but in all branches of medicine and also in health education. At the present time, the list contains approximately 830 films on the professional level, 63 for hospital personnel, and 18 for the laity. During the past years, a number of films have been withdrawn from the list. The information on each film consists only of its title, production year, name of author, format, and source of procurement (without data on distribution *terms*). The College has been of service to the medical profession by making this annual list available. It is valuable as a reference to existing films, but because of the paucity of its information it cannot be relied upon for purposeful film selection by medical teachers. The coverage is incomplete, since apparently many worth-while or important motion pictures have not been reviewed by the College, which is inevitable in a system based on voluntary submission of films. On the other hand, it can be assumed that the College has rejected many undeserving films and thereby prevented or at least reduced their circulation.

1. "Medical Motion Picture Films," obtainable from American College of Surgeons, 40 East Erie Street, Chicago 11, Ill.

The Catalog of the National Film Board of Canada

A comprehensive evaluative effort was begun in 1944 by the National Film Board of Canada in connection with the selection of films for a library serving the needs of the medical schools of that country. Medical and biological films were called in to be reviewed by the Board and evaluated by "Appraisal Groups" at the medical schools, each group consisting of six to ten subject-matter specialists and teachers and one or two students. The films were rated by means of an appraisal form, adapted from one originally designed by the British Scientific Film Association. A mimeographed catalog of the accepted films (which is no longer available) was published in 1946, and supplementary pages have been issued from time to time.[2] Some 220 film reviews have been prepared. Each film review gives production data, subject classification, a content abstract, and an appraisal covering audience level, film type, purpose of film, and comments. The content abstracts are precise, but the comments vary in extent and depth; by and large, they are brief and stereotyped, and do not always provide specific, critical detail. Even so, these reviews are valuable for reference purposes and represent an impressive amount of organizational and editorial work.

The Reviews of the Journal of the American Medical Association

A frankly critical approach to medical films was chosen for the reviews which the Journal of the American Medical Association began to publish in 1946; it was a new and important departure in the American medical literature. Since that time, some 300 film reviews have appeared in the Journal. They resemble book reviews in that they follow no uniform and definite pattern of analysis and their critical standards vary. Most of them are brief. Usually, they consider purpose and content of the film, make critical comments, and close with a statement on audience suitability and utilization. The information on the film content is sometimes summary, sometimes descriptive. Descriptive and critical elements are occasionally interspersed. The comments range in depth from the searching and convincing to the superficial and casual. Criticism of subject matter prevails; teaching considerations are sometimes briefly mentioned. The relationship of film structure and presentation to effectiveness is occasionally considered; the discussion of film quality is generally limited to summary judgments of photography, sound track and titles. These reviews—also available as a volume of reprints[3]—are an important source of information on current, and occasionally also older, medical films.

Catalogs and Lists Prepared by Specialty Groups

The broader evaluative efforts covering all branches of medicine have been supplemented by the work of a few specialty organizations. Since 1941, a committee of members of the American Association of Anatomists, American Society of Zoologists, and the Wistar Institute has "approved" about 50 films

2. For information apply to Research & Distribution Officer, Health & Medical Films, National Film Board of Canada, Ottawa, Ont., Canada.

3. "Reviews of Medical Motion Pictures," obtainable for 25c from Order Department, American Medical Association, 535 North Dearborn Street, Chicago 10, Ill.

and published brief reviews which are mainly descriptive and follow no definite pattern of appraisal. The latest list[4] contains film titles and physical data only. Also since 1941, the Committee on Materials for Visual Instruction in Microbiology of the Society of American Bacteriologists has published mimeographed information on 172 motion pictures so far, as well as on filmstrips and lantern slides.[5] These film reports include detailed information on format, production and distribution, a content abstract and a statement as to whether or not a film has instructional value, and for what audience. Sometimes a stereotyped sentence on the quality of the film is added, but specific criticisms are rare and limited. In 1946, several members of the American Society for Pharmacology and Experimental Therapeutics took up reviewing of films in their field and later published a catalog[6] which is partly descriptive and partly non-descriptive, with occasional critical remarks. Its main value lies in providing orientation on the accessible film material of possible usefulness in teaching the various aspects of pharmacology.

Other specialty groups have also published lists or catalogs which, in general, are either non-evaluative or rate films in the broadest terms. Another source of information, somewhat difficult of access, is the convention programs of organizations that view films before accepting them for exhibition at their meetings. The total of such lists represents an immense amount of time spent in film viewing; unfortunately, what comments were made during the screenings have remained unpublished and unavailable.

Producers' and Distributors' Lists and Catalogs

There exists a great number of catalogs and lists put out by medical film producers and distributors, such as government agencies, pharmaceutical houses, medical organizations, commercial film producers, film-making physicians, etc. Varying in appearance from the simple to the elaborate, and in content from the scantiest data to detailed descriptive or promotional material, they are all, of course, uncritical. Some are models of careful information, such as the "Film Catalog-Utilization Guide" of the Communicable Disease Center, U. S. Public Health Service,[7] or of the Psychological Cinema Register, of Pennsylvania State College.[8] Others, such as the Army's medical film distribution list, are merely unclassified accumulations of titles.

Compilations

Finally, there are some extensive catalogs which have been compiled from other information sources and from questionnaires. Among them is the "Cumulative Index of Professional Motion Picture Films,"[9] prepared by the

4. "Approved Motion Picture Films," obtainable from Wistar Institute of Anatomy and Biology, 36th Street and Woodland Avenue, Philadelphia 4, Pa.

5. Obtainable from Dr. Harry Morton, Department of Bacteriology, University of Pennsylvania School of Medicine, Philadelphia 4, Pa.

6. "Films with Direct or Implied Pharmacological Content," obtainable from Dr. R. P. Walton, Medical College of South Carolina, Charleston 16, S. C.

7. Address requests to Medical Director in Charge, Communicable Disease Center, 50 Seventh Street, N.E., Atlanta 5, Ga.

8. Obtainable from Psychological Cinema Register, Audio-Visual Aids Library, Pennsylvania State College, State College, Pa.

9. Obtainable for $4.65 from Hall Lithographing Company, 623 Kansas Avenue, Topeka, Kan.

Academy-International of Medicine, of Topeka, Kansas. It first appeared in 1948; a supplement was issued in 1949, and a reprint of the catalog published in 1950. The volume is one of film titles, overcodified data and, where given, content statements which are in most cases enormously compressed. Distribution terms for the films are not given. The catalog is comprehensive as a register, but cannot be used for purposeful film selection.

Another compilation is the Veterans Administration's "Reference Catalog of Medical Films and Film Strips,"[10] a 1950 revision of a catalog first published in 1947. This volume is also comprehensive; content descriptions range from one-sentence statements to abstract length, but are missing in many cases. The preface candidly states that the catalog is uncritical and that deserving films may have been omitted and unsuitable ones included.

THE PURPOSES OF CRITICAL CATALOGING

In spite of the existence of the sources of information described above, the effective selection of films for teaching purposes is, in most instances, still a time-consuming and difficult procedure. If films are used in teaching situations without having been previewed, they are bound to be failures in many cases. On the other hand, the conscientious examination of films on a given topic, course, or branch of medicine requires an expenditure of time, money and work which is as a rule disproportionate to the number of usable films found. Many individual teachers as well as departmental staffs have gone through this tiresome procedure, and it is somewhat ironical that the same—suitable and unsuitable—films have been examined again and again by different users, all of whom were out to find films for identical purposes. The problem becomes even more involved when private organizations or public agencies establish or operate film libraries. Not every one of them can, or cares to proceed as methodically as, for example, the National Film Board of Canada. Indeed, there have been cases where a large number of films was purchased without examination, on the basis of available catalog information alone, or with only some perfunctory kind of previewing, to the great sorrow of both owners and users.

The demand for accurate film information is great. With the present information material, and also because of the nature of the existing films, it is seldom possible to meet this demand in a thorough and reliable fashion which can give the inquirer what he needs and insure him against serious and expensive disappointments. This difficulty is caused by lack of coverage and detail of the information sources. A deeper problem is that the information sources take medical films too much for granted as they are. The objectives of the films, the manner in which their subject matter is treated and the ways in which the film medium is used to implement the objectives are rarely considered methodically. Therefore, film authors and film makers do not learn enough about the many factors on which the significance and effectiveness of their productions depend. And the users of films, particularly the teachers, are not

10. Address requests to Medical Illustration Division, Research and Education Service, Veterans Administration, Vermont and H Streets, N.W., Washington 25, D. C.

made sufficiently aware of the general and particular features that determine the purposeful employment of films.

Primary Purposes of Critical Cataloging

It would appear that critical cataloging should fulfill four primary purposes: It should have sufficient scope; facilitate film selection; improve film use; and improve production.

1. *Sufficient Scope*—Since the number of existing films as well as the rate of new production are very high, the question may be raised whether cataloging should be selective and limit itself to films of definite importance, quality or usefulness. Apart from being almost inevitably arbitrary, a "selective" approach would not be in line with the realities of film use. The existence and availability of films are made known by lists, catalogs, promotional material and other methods. Time and money are expended by users to procure films, without knowing whether they are suitable for the intended purpose. Even if they are not, they are often used, once they have been obtained. These circumstances cannot be overlooked if critical cataloging is not only to facilitate film selection but also to bring about a more purposeful employment of motion pictures in medicine.

Cataloging should therefore concern itself with every film in *active* distribution. This ideal aim could be approached only by a large organization over a long period of time; it will require some simplifications and limitations. From a practical point of view, then, cataloging should first concentrate on current production and attempt to review all new films which are publicized and brought into circulation. At the same time, it should begin to comb previous film material. An attempt should also be made to secure and catalog foreign films of interest, as well as to search for pertinent unlisted material.

It is obvious that fragmentary coverage would be of limited value. What the teacher needs is an up-to-date and fairly comprehensive critical catalog of films in his field. In view of the complex nature of critical cataloging and the great number of films in many branches of medicine, this can be only gradually achieved.

2. *Facilitation of Film Selection*—The catalog should provide information which is specific enough to answer all pertinent questions about a film and to make it, if possible, unnecessary for the user to preview it before deciding on its use or non-use. (This, of course, does not mean that a teacher should not study a film before employing it in his teaching.)

3. *Improvement of Film Use*—One of the most important functions of critical cataloging is to sharpen the sense of film users for the various instructional functions of films. Cataloging must therefore pay particular attention to the educational analysis of films, to their purposes, to the manner in which these have been realized, and to the resulting applications of the films for specific teaching objectives. Such analysis will reduce educationally wasteful use of films; at the same time, it will advance their effective integration with the other methods and media of medical teaching and communication.

4. *Improvement of Production*—The analysis of existing films cannot by itself provide specific guidance for the making of future films, but it will markedly influence those engaged in production—the sponsoring agencies, film authors, production supervisors, medical advisors, film makers and also those physicians and scientists who act as their own producers or are themselves film makers. It is hoped that methodical criticism will aid them in obtaining clearer concepts on all aspects to be considered in the planning and execution of medical films.

Secondary Purposes of Critical Cataloging

As the cataloging grows in volume and covers more and more of the newly produced and older material, it will help to fulfill several secondary purposes:

1. *Facilitation of Production Programing*—The catalog will make it easier to avoid unnecessary duplication in production and to determine the gaps which need be filled with effective films.

2. *Improvement of Distribution*—As full and critical film information becomes available, the demands for films of value will increase. This will contribute to the development of a stabilized market for medical films, which in turn will make it possible to devise more practical distribution methods and facilities.

3. *Preservation of Historical Material*—As cataloging extends to older films, more and more material of historical value will be discovered, and steps can be taken for its preservation. With the passing of years, many of the films produced today will also become historical; the catalog will then constitute a ready information source for this purpose.

4. *Reference to Stock Footage*—By giving precise content descriptions and analyses the catalog will serve as a guide to potential stock footage, that is, to parts of films which can either be included in new films or be edited as excerpts. This refers in particular to material dealing with rare diseases, difficult observations and other subjects which cannot be easily duplicated or are unique.

5. *Reference for Studies*—The existence of a body of detailed catalog information—and the availability of the films themselves—will facilitate the procurement of motion pictures to serve as basic or supplementary study material for various purposes of investigation and research. The clinical investigation of rare diseases, research in cytology, physiology and pathology, the study of the development of operative techniques and of the accomplishments of prominent surgeons are a few purposes that could benefit from such use of motion pictures.

THE PRINCIPLES OF CRITICAL FILM REVIEWING

A critical catalog giving detailed and specific information on medical films should consist of critical film reviews. The preparation of such reviews must cope with three principal problems: The problem of film description; the problem of film appraisal; and the problem of film utilization.

The Content Description

The problem of description is concerned with the film content. In considering the amount of detail that should be given in a content description, it is not so much the problem of brevity versus length that appears decisive but rather the question, "How much specific information does the teacher or other film user need to judge whether a film is suitable for his purposes?" A definite answer to this question can come only from experience.

If a description makes it clear that a given film merely surveys a subject on a broad fashion, it might be sufficient to enumerate its topics, although it would be useful to know what is being shown and what is merely heard or indicated by titles. Yet most medical films are far more specific, and many are complex in structure. If a description contains an item such as "Use of the microscope in malaria diagnosis," this item is rather meaningless to a reader who wants to know what the film in question actually conveys on this point. Obviously, even if a film description is sketchy or summary, individual items can be described later, when they are critically examined. This method is sometimes sufficient, but in general it cannot provide the reader with a rounded mental picture of a film's content.

It would appear that, above all, an effective content description should be precise. It ought to convey what is *actually* in the film, and not its *intended* content. It should also be detailed enough to give an adequate account of all essential points and should try to reproduce the structure of the film. The reader should be enabled to recognize from the description what in the film is presented visually, and what is merely reading or spoken material, and whether the subject is developed in a lucid and coherent or in a disjointed and confusing way. The ease or difficulty of preparing a content description of this type varies from film to film and according to film type. In a general way, the worse a film is as a film, the greater is the difficulty of preparing an adequate description of it. It is greatest in the case of the "illustrated lecture" type of film, in which the pictorial content is merely an accompaniment to the words and has no meaning of its own.

The Problem of Analysis

A precise content description alone may tell much about the purpose or value of a film to a reader who is an expert in the film's subject and knows much about motion pictures. But it cannot tell everything. In order to obtain a rounded account of a film it is necessary to submit it to a methodical analysis which should furnish *reasoned* judgments on the main aspects of a film. These can be defined as: (1) The film's purpose and objectives; (2) The treatment of its subject matter; (3) Its content; (4) The presentation through the motion picture medium; (5) The film's effectiveness.

This separation of the analytical approach into categories may appear rigid and artificial. Actually, every film forms a unity in which the five categories are usually interrelated; they are therefore difficult to separate. Yet it is only

by adoption of a *method* that definite and uniform standards of criticism can be established.

Appraisal of Purpose and Objectives

Unless a film represents more than a record of some single phenomenon, it is important to ask for what reason it was made, what it wants to accomplish, and to whom it is addressed. Without such clarification, it is difficult to judge a film in an equitable way. It makes a great difference whether, for example, a film was made to reproduce a surgeon's skill or to teach an operative technique. It is characteristic of present-day medical films that the purpose and objectives of many of them are not easy to determine. However, not only the clarity of the objectives, but also their validity must be examined. Are they justified and appropriate from the point of view of teaching or information, importance of subject, use of the motion picture medium? And are the objectives congruent, do they form a meaningful whole, or are they little related or even incompatible?

Appraisal of the Treatment of the Subject Matter

The next step is to appraise how the subject matter of the film has been treated in terms of implementing the objectives. Is the scope of the film appropriate for the attainment of the objectives, is it too wide or too narrow? Is the material treated uniformly and developed logically in terms of the understanding of the intended audience? Does it contain elements that are too simple or too complicated? Is material missing that is necessary for the proper understanding by the specific audience of the film? Does it contain extraneous elements? Are the emphases placed correctly? That is, are the parts of the film proportioned and given detail according to their importance in the over-all context? These are some but not all of the categories that must be considered in order to determine whether the subject matter has been conceived and organized in such a way that the film can accomplish its objectives.

Appraisal of the Content

However, the core of the examination of most medical films is the technical analysis of their contents. Whether the purpose and form of the films, they all serve primarily to preserve or disseminate scientific knowledge. The significance, authenticity and validity of their contents is therefore a paramount consideration. It should be emphasized that medical films vary greatly in these cardinal aspects. Any physician who has access to a film camera can buy a roll of film and take a movie; conversely, the fact that a film has cost a great deal of money is no guarantee for high authenticity of its content. It is therefore necessary to apply precise and high critical standards to the technical examination of the subject matter. The contents of medical films range very widely from the accepted to the controversial. Medicine is forever changing. Authority, wisdom and open-mindedness are needed to obtain judgments which are valid, balanced and objective.

Appraisal of the Film Presentation

Up to this point, the analysis has dealt with categories that, to a large

extent, do not pertain to the film medium itself. Most above approaches and criteria of analysis can also be applied to a book, article or lecture. At this point, however, the analysis must consider that the subject is presented through the medium of the motion picture. Actually, such a neat separation of categories is not always feasible in film analysis, because the purposes, form and content of many motion pictures are determined by the fact that the film medium exists. No visual record of a surgeon's operative skill could be made prior to the invention of motion pictures, nor was it possible then to observe a gait disorder slowed down ten or one-hundred times. And also the way in which the subject matter is developed and organized is often subject to the pecularities of motion pictures.

Yet medical film analysis must consider that the extent to which the subject is conveyed depends upon the mastery of the medium. Special consideration of the photographic and other physical qualities is relevant only if they are above or below average. The latter is the case in the many films the usefulness of which is reduced by poor exposure, poor editing, etc. Of far greater consequence is, however, the examination of other categories of motion picture presentation. It is important to know in what way the means of the motion picture have been applied; what factors make a given film a superior vehicle for the transmission and retention of knowledge, or make another one ineffective. Such factors are the structure and continuity of the visual material; its relationship to the verbal matter contained in titles or on the sound track; the pace and style of presentation, and others. Their careful analysis is pertinent not only in terms of the film under discussion but also for a better general understanding of the motion picture medium as applied to medical subject matter.

Appraisal of the Film's Effectiveness

Much that bears upon the effectiveness of a film will have been stated during the preceding steps of the examination, but specific conclusions can only be drawn after all the above aspects have been carefully considered. It will then be possible to formulate more definite answers regarding these questions: "What can be learned from the film? Who can learn from it? How well can one learn from it?" The answers will provide estimates of the specific teaching objectives which the film can help to attain at the various levels of medical education and information, and of the ways the film can be fitted into the processes of teaching and learning. As a result of such analysis, it will become increasingly clear to the teachers that medical films vary greatly in terms of their functions, and that these different functions manifest themselves in different *types* of films which again require different modes of utilization. Obviously, a film illustrating a single phenomenon or one demonstrating a procedure must be used for a different teaching purpose from a film which orients on a broad topic or one which tries to impart desirable attitudes.

Methods of Utilization

Most existing medical films are not designed for a specific method of utilization, and they are therefore used in a supplementary rather than an

integrated fashion. This often makes it impossible to derive such benefit from a film as might be obtained if it were used in a more discriminating way. The analysis of a film's effectiveness lays the ground work for a consideration of its methods of constructive application. Some films can serve as basic instructional material, while others are best employed for purposes of introduction or review. The use of portions of a film is frequently preferable to its being shown as a whole. The role of the teacher usually needs clarification. Expert interpretation or guidance is indispensible in the use of many films. Conversely, there are films which should be used by the individual student as he uses a textbook. Accompanying film study guides and brochures must be examined for their value.

To give the teacher or other medical film user concrete advice on how to employ a motion picture for the stimulation of interest, expansion of knowledge and deepening of understanding is an important contribution critical cataloging can attempt to make. However, not every possibility and method of utilizing a given film can be foreseen; without doubt, it is in this point where the actual teaching experience will have to make its own contribution.

THE METHODS OF CRITICAL CATALOGING

The methods of critical cataloging are based upon the work of the cataloging staff and its collaboration with subject-matter specialists, teachers and audience groups. The practice has evolved along the following lines.

A film is either requested for review or sent in by its author or distributor on his own initiative. In either case a *Film Information Form* is mailed to the source of the film. This form has been designed to obtain routine data as well as special information on legal ownership; availability, condition and location of the original, duplicate negative or master print; full production credits; distribution arrangements; purpose, content and audience of the film; accompanying materials; and scientific papers directly related to the film. Copies of accompanying materials and reprints of papers are obtained, if possible. If adequately completed, this form is a valuable source of data not generally available.

When a film is received it is viewed by staff members and assigned to one of them or to a part-time collaborator. He studies the film and takes detailed notes from which he prepares the *Content Description*. He is now familiar with the film and can formulate the special problems of appraisal posed by it.

As mentioned before, the process of appraising a film is based on the principle of the reasoned judgment. Statements such as "contains inaccuracies," "excellent film," "poor photography" are of little value; an analytical approach requires that it be known what the inaccuracies are, why the film is excellent, or how the poor photography affects the film. The aspects on which answers are sought have been carefully formulated; they vary according to the categories of film viewers who are asked for their judgment.

Specialists Screenings

As the first step in the appraisal procedure, a small number of subject-matter

specialists is invited to see the film, if possible as a group. The greater the specialization of the film, the greater care is taken to select men who are authorities on the subject, but who, as a group, can give a balanced judgment. After the screening, a discussion is held. This is first free and informal, but gradually the staff member in charge of the film begins to guide the discussion in order to elicit comments on specific questions and to insure that all aspects of the analysis are covered. Some subject-matter specialists are thoroughly familiar with motion pictures and easily adapt this knowledge to a methodical critical approach; others learn to understand this approach after a few screenings. Naturally, in these screenings, the main emphasis is on the film content, but since most of these medical specialists are also teachers, the educational factors are taken into consideration, often rather thoroughly. Likewise, there is discussion of the aspects of film presentation. Most of the subject-matter experts appear to enjoy these screenings, and, in spite of their being busy practitioners, may sometimes discuss a twenty-minute film for a full hour. The discussion is recorded on tape and later transcribed or used direct in the preparation of the review. The names of the viewers, as well as those of the participants in other types of critical reviewing, are kept in the files but are not published; this anonymity permits a freedom of discussion that would otherwise not be possible.

Audience-Response Screenings

In the case of highly specialistic films, one or more screenings with subject-matter specialists may be all that is needed to obtain sufficient critical material. Yet most films applicable to levels below that of the specialist need further work. It is necessary to ascertain what the audiences think of the purpose, content and presentation of a film, and what they believe they can learn (or not learn) from it. Such "audience response" screenings are of various types. A group of students, with or without teacher, may see the film at the office of the Institute, or screenings are arranged at medical schools or hospitals, for medical students, hospital staffs, resident groups, etc.; sometimes they are held under actual teaching conditions, during classes, seminars and the like. If required, a film is screened several times, either to obtain responses from groups representing different audience levels or to put the appraisal process on a wider basis. During the past year, collaboration has also been established with groups at medical schools outside of New York City which view films and send in their comments.

In screenings with groups composed of teachers and students, or generally with groups representing different audience levels, as well as in screenings at which no member of the Institute's staff is present, a special method of obtaining comments is often used. It consists of two stages: the completion of "film appraisal forms," and subsequent guided discussion. Four such appraisal forms have been designed: for subject-matter specialists and teachers; for general practitioners and specialists in fields other than the film subject; for medical students and interns; and for non-technical audiences. (See Appendix A, p. 21.) The use of these forms makes it possible for each audience member to

record his impressions uninfluenced by others; at the same time, the forms attempt to provide guidance for an analytical approach to the film. As a rule, the subsequent discussion yields additional viewpoints and comments. With groups of teachers and students (or even of Chiefs of Service and residents) it appears advisable to ask the students to speak first in the discussion, in order to prevent their comments from being influenced by those of their more advanced colleagues and their teachers. While in some cases the teacher-student relationship does not interfere with free expression, in others it is of such a nature that students can hardly be persuaded to make specific statements because they fear their views might be unfavorably received by their teacher.

The completed appraisal forms and notes or a transcript of the discussion are mailed to the Institute. This method is still in an experimental stage. In general, it is the source of much specific information, especially from the subject-matter specialists and teachers. Yet it seems that to make it fully effective every collaborating group should have a leader who understands the purposes of medical film analysis and is eager to contribute to them.

The Preparation of the Film Reviews

As can be seen, a serious study is made of every film unless it is completely insignificant. When the staff considers that sufficient appraisal data on a film have been secured, the preparation of the film review can begin. It is the main product, but not necessarily the end product, of all the labors. The raw material is often considerable, including such items as: *Film Information Form,* descriptive circulars, study guides, promotional literature, scientific papers, and sometimes also the script or the narration or title sheets. To this comes the *Content Description,* the staffs own critical notes, and the appraisal material in form of tape recordings, transcripts, appraisal forms, discussion notes, and letters with comments.

The film review itself consists of several sections. It is headed by notations of the *film type* and main *subject-matter classification.* Under the film title follow all essential *physical, production and distribution data.* The review proper is opened by a *General Statement* (which is prepared last). It attempts to give, in a few sentences, a highly concentrated but inclusive resumé of the substance of the content, and of the quality of the film from the subject matter, educational and motion picture points of view. It is followed by a statement on the film's *audience.*

This introductory section of the review is designed for rapid information. After perusing it, the reader may decide that the film is of no interest to him and stop at this point. Or he may go on to the full review which opens with the detailed *Content Description.* This is followed by the *Appraisal,* which consists of three sections, entitled *Content, Presentation* and *Effectiveness.* The term "Content" is somewhat unprecise but it is used (for the time being at least) to avoid a further subdivision; it actually embodies the appraisal of the purpose and objectives; treatment of subject matter; and content proper. The *Appraisal* is followed by a section headed *Utilization,* which includes suggestions on the methods of using the film, a discussion of the study guide or other accompanying

materials, if such are available, and, if pertinent, references to literature specifically related to the subject of the film.

The preparation of such a review is not simple. In addition to familiarity with the film medium, it requires the ability of descriptive writing for the preparation of the *Content Description*. For the *Appraisal*, not only is highly analytical thinking a prerequisite but also the ability to recognize essential features and to synthesize them with critical judgment from the critical detail furnished by others; and, finally, to organize the findings on each aspect of the film from generalization to particularization.

It is planned to publish these film reviews in three ways. The basic publication is to be a loose leaf catalog, a form of publication permitting flexibility and the addition of new material. Several indices will facilitate the use of the catalog, among them a topical index. A second form will be the publication of reviews on films in specific subject matter areas; a beginning has already been made in this respect. (See below.) Finally, it is hoped that specialty journals will accept for publication reviews of selected and important new films.

THE PROGRESS SO FAR

The first months of the work have been largely devoted to the development of methods and the establishment of procedures. Progress has been made in both respects, although not every phase has yet been settled. It must be obvious from the above account that critical cataloging is a complex process. It depends on the voluntary cooperation of numerous medical men and scientists who are asked to contribute time and advice. It also depends on the cooperation of medical schools and hospitals which are requested to set aside the time of teachers, students and physicians for the purposes of this work. This cooperation presupposes an interest in and understanding of the problems and objectives of medical film analysis. This interest and understanding are pre-existent in many individuals whose assistance is therefore easily secured. Yet in others, interest must be aroused first, and they must be made to recognize the significance of the task. A recurring problem is the difficulty of getting subject-matter specialists or groups to view weak films. Persuasion is needed to convince them that critical reviewing of such films is often more important that that of good ones. As the purposes of critical cataloging become better understood, such difficulties will decrease.

Some needs of collaboration have not yet been solved. New York City and its vicinity do not harbor many "typical" general practitioners; yet the general practitioner's response is important in the study of many films. In time, the Institute hopes to work with groups of rural and urban general practitioners, each group comprising about eight to twelve members, under an interested and active leader. Another group which has not been systematically approached as yet is those teachers who have had extensive experience in the integrated use of films.

The amount of clerical and physical work involved in every film is considerable. Frequently, a great amount of effort is necessary to schedule

screenings; for example, to get three or four busy surgeons to attend a screening at the same time is always a complicated job. As the work develops, certain aspects of its operation may become simpler.

The number of films on which reviews must be prepared is very great. Unless the process of cataloging can keep pace with the output of films and can satisfy the demands for information on new as well as older films, it will lose much of its practical significance. For this reason, the crucial problem is that of finding and training men and women who can do the job of critical cataloging on a full-time or part-time basis. They must be physicians or scientists, and possess an interest in visual education, an analytical mind, and the ability to write.

As to the concrete results achieved so far, the national emergency has affected the work almost from the beginning. The planned program of films to be reviewed had to be greatly altered to take care of emergency training needs. A comprehensive project of examining films in atomic medicine was undertaken, and a volume of reviews published in a preliminary edition in the Fall of 1950; it is now being issued in printed form.[11] Reviews of films in traumatic surgery and in tropical medicine are now in preparation. Under a grant from the National Cancer Institute, U. S. Public Health Service, motion pictures on cancer are being reviewed. A first installment of twenty reviews of such films was published in a preliminary multilithed edition in February 1951. A number of psychiatric film reviews and a set of reviews of films on miscellaneous subjects will be published soon, again as preliminary editions. It is hoped that arrangements can be made in the near future for printed publication of the material in the form of a catalog service. During the past year, the Institute, jointly with the New York State Medical Society, has also participated in the preparation of a catalog of the medical films distributed by the New York State Department of Health.

Spontaneous comments received so far on the reviews prepared by the Institute have been favorable. A greater number of responses is expected as a result of the first two publications, mentioned above. The usefulness of the reviews in the actual teaching practice will be the test for the validity of their approach. Already some collateral effects of the reviewing work have occurred. A few films have been or will be withdrawn from circulation because of unfavorable criticisms received. An unsuitable sequence was removed from an important film. Suggested revisions were carried out in others. Improved distribution arrangements were made for several films, as a result of suggestions arising from the reviewing activities. On the advice of the Institute, an expensive film, which had been examined before its release, has been largely remade.

The success of critical cataloging will in the first place depend on the response of the medical profession, and, in the second place, on the ability of the Institute to increase its output of film reviews. If the profession, and especially the teachers of medicine, feel that critical film cataloging makes a significant

11. "Reviews of Films in Atomic Medicine," obtainable for 50c from Health Publications Institute, Inc., 216 North Dawson Street, Raleigh, N. C.

contribution to medical education, the Institute will not fail to find full-time or part-time staff members for this work and will obtain the indispensable voluntary cooperation of individual physicians and institutions. So far, the cost per film reviewed has been high. This is perhaps inevitable in the first stages of a new operation for which no precedent exists. As the rough spots in the operation are straightened out, and as more trained collaborators become available, the cost per film will decrease. The possible simplification of the review pattern for some film types will have the same effect. Nevertheless, critical cataloging is likely to remain expensive, if it is done in a thorough and conscientious way—and there appears to be no other way of doing it well. If the millions spent every year for the production of medical films are considered, a small fraction of this amount for their critical analysis may be very well justified, if this leads to the improvement of the medium and to its better utilization in the service of medical education.

Still, one may ask whether it is really necessary to subject the films to the difficult and elaborate procedure which has been described and to go to the trouble of preparing this type of careful and detailed film review. The effort is worth-while, if the potentialities of medical films are regarded as real; and it is necessary, *at the present time,* to be methodical and elaborate. It is hoped that this approach will aid both medical film makers and film users in recognizing the peculiar aspects of motion pictures, and that, as a result, the standards and procedures of film making and film utilization will rise. As this occurs, the need for elaboration in the preparation of critical film information will diminish. What requires elaboration today will be self-evident tomorrow. The reviews will become simpler and shorter. As the understanding of the motion picture medium in medicine becomes more general, it may be possible to place the preparation of critical cataloging on a wider, collective basis, through the active participation of many groups.

APPENDIX A

The film *Appraisal Form* reproduced below is the result of several revisions. It may undergo further changes. As pointed out in the text (p. 17), three other forms have been prepared: for students, general practitioners, and for non-technical audiences. These forms are simpler and briefer, and have a different emphasis.

The form is reproduced without the spaces provided for answers.

FILM APPRAISAL FORM FOR SUBJECT-MATTER SPECIALISTS AND TEACHERS

Name (please print):_____ Position:_____

Institution:_____ Specialty:_____

Please give *specific comments with reasons,* whenever pertinent. Not every question is applicable to every film, and on occasion answers may be self-evident. *Your comments will be kept confidential.*

TITLE OF FILM:_____ DATE OF SCREENING:_____

PURPOSE

1. What, in *your* opinion, was the author's, sponsor's or producer's purpose for making this film, and what audiences do you believe he had in mind?

UP-TO-DATENESS

2. Is the film up-to-date?_____If not, in what specific aspects is it obsolete, and how does this affect its usefulness?

VALIDITY

3. What in this film represents established or accepted knowledge and practice?
4. What portions are (a) Controversial; (b) Not yet accepted; (c) Not likely to be accepted; (d) Not acceptable? (Please explain.)

SCIENTIFIC SIGNIFICANCE

5. What is the scientific importance of the *subject matter* of this film? (*Not* of the film itself.)
6. What in this film represents original contributions of the film author or of his school? (If the latter give name.)

OBJECTIVITY

7. Is the film objective?_____If not, in what respects does it contain bias, over-emphasis, overstatements, understatements, omissions, unjustified or unproved claims and conclusions?

ACCURACY

8. What factual errors does the film contain?

PERFORMANCE OF TECHNIQUES

9. How would you evaluate the performance of technical skills shown in this film as to general quality and particular virtues or weaknesses? (This applies to surgical operations, investigative, diagnostic and therapeutic procedures, etc.)

TREATMENT OF SUBJECT MATTER (Judge in terms of the film's objectives and audiences.)

10. What material essential for optimum understanding and learning of the subject is inadequately treated or missing?
11. What material is unimportant; extraneous; too elementary; too complicated; too detailed?

PRESENTATION

12. Is the visual and verbal presentation in all points: Clear_____Technically sufficient, correct and realistic (camera, sound track, titles, animation, direction, acting, etc.) Is it easy to follow and retain?

EFFECTIVENESS

13. As a specialist, what particular value has the film, or parts of it, for you and your co-specialists?
14. As a teacher, would you use this film?_____Or any parts of it? (State which) What specific teaching objectives would the film help you achieve?
    If you would not use the film, give reasons (unless obvious from previous statements.)

AUDIENCE SUITABILITY

15. With which of the following audiences can the film be used? (Double check audiences for which the film appears particularly well suited.)
    Medical students: Preclinical years_____Clinical years_____
    Internes_____Residents_____Specialists_____
    General Practitioners: Urban_____Rural_____
    Nurses_____Technicians_____Medical auxiliaries_____
    College_____Senior High School_____Junior High School_____
    Elementary School_____
    Interested lay groups_____General public_____
    Other technical groups, and groups in other sciences:

UTILIZATION

16. In what way could the film be used?
    a. *In the classroom,* as: Introduction____ Basic material____ Review____ Supplement____ in conjunction with lectures or courses in: (indicate subject and educational level)
    b. Extracurricular____
    c. For *methodical study by individual* viewers or *small* groups____
    d. Does the film require for effective application: Introduction____ Interpretation____ Discussion?____ Should it be shown in *parts* rather than as a *whole?*____ Should there be *repeated* showings?____
    e. Other utilization suggestions:
    f. Do you believe the film or parts of it are important enough and would be used routinely enough to justify incorporation in the film library of your institution?____

REVISIONS

17. If they were feasible, what revisions would you suggest?

OVER-ALL APPRAISAL

18. In summary, what is your over-all opinion of the film (especially of its *good* points)?

APPENDIX B
EXAMPLES OF FILM REVIEWS

Type of Film: Motivational; Orientational

Classification: NEOPLASMS
Diagnosis
Internal Medicine
Gastroenterology

GASTROINTESTINAL CANCER: THE PROBLEM OF EARLY DIAGNOSIS

16mm, color, sound, 1200 ft., 33 min.

Year of Production: 1950; *Country of Origin*: U. S. A.

Sponsor: American Cancer Society and National Cancer Institute of the U. S. Public Health Service, Federal Security Agency; *Medical Advisers*: Drs. Ross Golden, Gordon McNeer, George Pack, and Owen Wangensteen; *Producer*: Audio Productions, Inc., New York.

Distribution: American Cancer Society, Inc., 47 Beaver Street, New York 4, N. Y., *Sale*: $138.28; State Health Departments or State Cancer Societies, *Loan*.

Accompanying Materials: Folder, "Gastrointestinal Cancer—A Summary for the Physician," booklet, "Gastrointestinal Cancer—The Problem of Early Diagnosis."

General Statement: **A survey of cancer of the esophagus, stomach, small and large intestines, and rectum, reviewing salient points in diagnosis and stressing the importance of early discovery and treatment in lowering mortality figures. Accurate in detail, and skillfully and conscientiously produced, the film makes its point, in spite of a somewhat static and statistic-conscious treatment.**

Audience: **General practitioners; residents, particularly of internal medicine; interns; medical students in their clinical years.**

CONTENT DESCRIPTION

In an operating room, a patient is prepared for surgery. The operating room, says the narrator, is the major battleground in the war against cancer, especially in the case of the stomach and other organs of the gastrointestinal tract, for which surgery offers the only hope of cure. As surgery begins, the narrator states that this

patient cannot be cured because of inoperable metastases. Whereas some types of cancer can be discovered by visualization, palpation, cytological methods or X-rays (pictured in brief shots) the stomach is not so accessible.

On a schematized representation of the gastrointestinal tract, the chief symptoms of cancer of the esophagus, stomach, small intestine, and large intestine are diagrammed in animation. These symptoms are summarized on a chart.

Carcinoma of the Esophagus: The incidence and mortality are charted. A patient is seen at his doctor, brought there by "one or two frightening episodes of dysphagia." He visits an X-ray man for studies. Cinefluorograms are shown of a normal person swallowing barium and one with carcinoma of the cardia. X-ray views of barium swallows in cases of diverticulum and of cardiospasm are shown for contrast. Esophagoscopy and biopsy are mentioned as a means of confirming a diagnosis of carcinoma. A brief glimpse of surgery is followed by a view of the patient a few weeks later, eating a relatively normal diet—an example of the benefits of radical surgery. Therapy by "super-voltage" radiation is also mentioned. Mortality statistics from various clinics (given in a table) differ, but show improvement.

Stomach: The incidence and mortality figures are added to the previous chart. A doctor is visited by a patient with a "typical" picture—he is an elderly male who has lost weight and experienced fatigue, anorexia and abdominal pain and has findings which point to gastric carcinoma. In contrast, an apparently healthy, middle-aged male visits his doctor with complaints of indigestion which are vague and even incidental. In diagram, the way in which the stomach must manifest its disorders via adjacent organs, vessels and nerves is considered. Diseases which stomach cancer may imitate—gastritis and ulcer—are shown in diagrams and pathological specimens. The symptom-and-sign complex of cancer of the stomach is arranged on a chart. The Sahli method for determining blood hemoglobin levels is demonstrated in detail, as is the gum guaiac test for occult blood in the stool. The major steps in obtaining and titrating specimens of gastric juice before and after histamine injection are also reviewed. The most reliable test of all is the X-ray; an obvious and an equivocal example are shown. In either case, surgery—shown in brief shots—provides the answer and the best chance for cure. Gastroscopy is a valuable aid to diagnosis. Views taken through a gastroscope are shown: normal rugae, normal antrum, a polyp, an ulcer, and cancer. On the chart, the benefits of prompt discovery and treatment are summarized—over one-half can survive.

Small Intestine: The incidence and mortality figures are added to the chart. Symptoms and signs are listed. X-ray is mentioned as the most effective way of discovering such lesions.

Large Intestine: After discussing incidence and mortality, the typical findings are listed according to regions and pictorialized by animation. The relationship between hemorrhoids and rectal cancer is mentioned. A chart lists the important signs and symptoms of rectal carcinoma. As a doctor is seen doing a rectal examination, the value of this procedure is stressed. The doctor then inserts a proctoscope. An example of carcinoma as seen through a proctoscope is shown. The doctor takes a biopsy. The generally accepted choice of treatment is abdominoperineal resection, which has made possible the cure of more than three quarters of all patients treated early. Polyps of the large bowel are discussed, with examples of their appearance by proctoscopy and X-ray. Proctoscopic views of colitis and the normal colon are shown for comparison. A diagram reveals the added value of a sigmoidoscope over a proctoscope in detecting tumors. The importance of X-ray examination is re-emphasized.

The film concludes by reiterating its thesis: "Early Suspicion, Accurate Diagnosis, Effective Treatment."

APPRAISAL

Content: This film surveys cancer of the entire digestive tract as a problem of early diagnosis and places the responsibility for detection with the general practitioner. In developing this important subject, extreme care has been taken to marshal the most representative and authentic material. In some places the film is orientational, and in others it is concerned with specific skills, but throughout, it remains motivational in stressing its theme of early suspicion in fighting malignancy. Although it seems anatomically logical to include the esophagus, stomach, small intestine, large intestine and rectum in one film, one is prompted to ask whether this is practical. Stomach cancer, for instance, requires a different sort of approach and different tests from the investigation of intestinal malignancy, a fact which is stressed in the film itself. More important, division of the subject into two films—one on the esophagus and stomach, and the other on the intestinal tract—would have permitted to organize the abundant material in a less concentrated fashion.

As a matter of fact, it is characteristic of this film that it approaches its subject by organ rather than by clinical picture. Although the material is aimed at—and will be most vital to—the general practitioner, the problem is not seen through his eyes. The film is an excellent and well organized account of diagnostic *procedures* and *technical data;* but there is not enough feeling here of the *clinical* approach to the body and mind of the patient. Patients are seen in fragmentary and for the most part clinically empty shots, and none of them is followed through as a person (unless one considers as a follow-up the brief view of the esophagectomized patient eating a meal). The practitioner will be as concerned with the impact which the possibility of cancer will have upon his particular patient as he will be about the over-all mortality rate of the disease; that personal relationship is hardly considered.

The facts on the disease are well presented. The only question that might arise in this respect is one of emphasis. The role of surgery is stressed to the point of proselytizing. Also, the emphasis on discovering malignancy is so strong that the importance of differential diagnosis is largely neglected. For example, anoscopy —part of a routine proctoscopic examination—is not mentioned, although it is the means by which internal hemorrhoids will be discovered. The absence of free acid in the gastric juice is perhaps overrated as a diagnostic lead, since this finding is so common in older patients; on the other hand, it would have been well to discuss the gross inspection of the gastric aspirations, the appearance of which often constitutes a significant clue to pathology.

Presentation: Well photographed and produced, the film is characterized by great attention to detail and orderliness and by clarity of organization. In line with the approach to the subject matter, the presentation springs basically from statistics and charts rather than from the clinical problem. Except when specific diagnostic procedures are shown, the photographic material consists of shots which illustrate the narrative but do not contribute to the visual development of the subject; they often consist of clichés, such as the essentially meaningless shots of a technician lowering the X-ray tube over the patient. The specific procedures demonstrated in detail—the Sahli method, the stool guaiac test, the gastric analysis —are beautifully and intelligently presented. Also outside and the excellent gastroscopic views, the proctoscopic cinematography, and the fluoroscopic motion pictures of barium ingestion. The charts and diagrams are clear and for the most part concise, although the necessity of having an elaborate drawing of the digestive tract hanging from the left side of most of them is open to question. As the other films of this series, this one is also opened and closed to the strains of a Brahms symphony.

Effectiveness: The care which has gone into the choice and interpretation

of the material in this film makes it a valuable survey of the diagnostic problems of gastrointestinal cancer confronting the physician—particularly the general practitioner. The film takes its logical place in the series of which it is a part; in common with its predecessors, it emphasizes well the importance of early suspicion and accurate diagnosis as prerequisites to effective treatment. In addition to this message, the general practitioner will also be given a chance to review certain simple procedures which he may have allowed himself to neglect. He will also have the valuable visual experience of reviewing certain techniques with which he may not be directly concerned, such as the gastroscopic and fluoroscopic procedures. He will not, however, be guided in the disturbing aspects of dealing with cancer as a patient problem, and he may find the film somewhat detached from his practical viewpoint. In this respect, the film is not clear as to which procedures it is showing for the practitioner's *use,* and which for his *information*—e.g., whether he is expected to perform the titration and sigmoidoscopy himself. General practitioners seeing this film sometimes consider the frequent, purely casual views of the operating room obtrusive and pointless.

UTILIZATION

This film seems best suited for showings before medical society meetings and hospital staff meetings. It should be of interest for interns and residents in their journal clubs. It will also be useful to medical students in their clinical years, probably at extracurricular gatherings rather than in any specific place in their course of study. Available with the film are a folder which summarizes the subject matter of the film, and a booklet which outlines the film, provides a bibliography and suggests questions for stimulating a discussion after the showing.
January 1951.

Type of Film: Record

Classification: SURGERY
Gynecology
Neoplasms
Uterus

RADICAL OPERATION FOR CANCER OF THE CERVIX (WERTHEIM'S OPERATION)

16mm, color, silent, 750 ft., 31 min.

Year of Production: 1947; *Country of Origin*: U. S. A.
Author: Joe Vincent Meigs, M.D., Boston; *Producer*: Davis & Geck, Inc.; *Camera*: Clifford F. Potts.

Distribution: Surgical Film Library, Davis & Geck, Inc., 57 Willoughby Street, Brooklyn 1, N. Y., *Sale*: apply; *Loan.* Also available on loan from Professional Film Loan Library, American Cancer Society, 47 Beaver Street, New York 4, N. Y.

General Statement: **This is a film record of a Wertheim operation for carcinoma of the cervix, as performed by an outstanding gynecological surgeon who is noted for his mastery of this particular procedure. The impeccable operative technique is shown in splendid close-ups; as a result, the procedure is easy to follow but appears deceptively simple in some respects.**

Audience: **Gynecologists, general surgeons, residents in surgery, medical students.**

CONTENT DESCRIPTION

Through a long lower midline incision, the anterior rectus sheaths and both rectus muscles are freed from their beds and retracted laterally. The peritoneum is opened, the uterus is drawn anteriorly with a blunt hook and the pelvis is inspected. The operation is begun with the development of an anterior peritoneal

flap, which is raised off the bladder. This dissection is continued inferiorly, releasing the anterior vaginal wall from the bladder. The right infundibulopelvic ligaments and round ligaments are doubly ligated by transfixion ligatures through the broad ligament and then divided fairly close to the ovary, which is left on the uterine side. This procedure is then repeated on the left side of the pelvis. After the right ureter is identified, the peritoneum over the right iliac vessels is incised lateral to the ureter with scissors. This incision of the peritoneum is continued into the pelvis, crossing and following the course of the ureter, which is seen in the lateral flap. The lymph nodes overlying the common and external iliac arteries are removed piecemeal by forceps and scissor dissection without ligating the internal iliac vessels. The first branch of the iliac artery, a small but important vessel to the ureter, and the uterine artery arising from the internal iliac artery are demonstrated. A view follows of the latter vessel after its division, and of the ureter after it has been freed of the peritoneal flap from the site of the above-mentioned small artery to its entry into the bladder. After identifying the obliterated umbilical artery, the dissection is continued deeply until the obturator foramen and in particular the obturator nerve are exposed. A similar dissection, "more difficult because of the presence of the sigmoid," is begun on the left side. On the left, lymph nodes are being lifted off the bifurcation of the iliac vessels in a single mass. The posterior cul-de-sac is shown and, according to title, its peritoneum is removed with the specimen. The uterus is then dissected anteriorly from the rectum in the region of the cul-de-sac. After division between clamps of the lateral ligaments of the uterus, the vagina is cut across, and the uterus, the vaginal cuff and the attached adnexa are removed. A small cervical lesion is revealed on opening the vaginal cuff. After a view is seen of the structures on the lateral pelvic wall which have been dissected free, the vaginal rim is closed with a continuous suture "for hemostasis," thus leaving the vagina itself open. The pelvis is reperitonealized with a running suture without constructing any supports for the vagina. The film closes with a view of the skin showing untied retention sutures.

APPRAISAL

Content: This is a film record of the performance of a Wertheim operation for carcinoma of the cervix. This operation, although developed some years ago, has become of increasing interest to operating surgeons because of the recent trend toward more radical surgery in the treatment of carcinoma. The film is of interest to the surgical world because it represents a demonstration of the operation by one of the foremost gynecological surgeons in the United States. His operative skill is evident in this performance, which is shown in detail in all its important points (except for numerous omissions during the duplicated surgery on the left side). It should be pointed out that the extent to which Dr. Meigs chooses to carry his dissection represents a particular method which lies between a more conservative and a more radical school of thought. On one hand, the infundibulopelvic ligament is ligated further from the pelvic wall than is considered advisable by some surgeons; the nodes along the iliac vessels are dissected piecemeal rather than *en bloc;* a good deal of tissue and peritoneum is retained in order to protect the ureter; and the decision not to ligate the hypogastric artery prevents removal of the tissues of the hypogastric stalk along with the uterus. On the other hand, other surgeons do not feel that the tissues should be excised as widely as they are here. Since this is a straightforward film record, no attempt is made to weigh this particular method against alternative procedures, but some indication should have been given that this patient, who is thin and whose disease is not far advanced, presents much fewer problems in surgical technique than is often the case.

Presentation: The film is a camera record of the step-by-step performance of this operation from incision to closure, with a demonstration of the specimen.

Three things help to give this film exceptional clarity; a photographically splendid close-up technique brings out the finer details of operative procedure and anatomic structure, and is at the same time flexible enough to maintain the viewer's orientation in the operative field; secondly, the shots are carefully chosen and of sufficient length to reveal the essential steps in the dissection and the manner in which they are performed; thirdly, the operator manages to keep his hands from obstructing the view of the camera even during the more difficult portions of the pelvic wall dissection. The color is physiologically true.

Effectiveness: The combination of excellent surgery and fine camera work renders this film a clear demonstration of the operation Dr. Meigs is performing. Even with the passage of time and the development of different operations for this disease, this record may well continue to be of some interest from a historical point of view. The expert on gynecological cancer surgery will find this film of interest as a demonstration of an outstanding colleague's work. Surgeons and residents seeking to learn this procedure will find it clearly shown; however, Dr. Meigs' skill makes the operation look much too easy and the inexperienced operator who may be encouraged to attempt this procedure is likely to find that his operative field is far more bloody and that extension of the lesion makes the operation much more difficult than is apparent here.

UTILIZATION

This film should be of fairly wide interest to audiences concerned with gynecological surgery. Residents in surgery would do well to have the film discussed by a qualified expert to point out the pitfalls and difficulties that might be encountered. The film, with interpretation, might also be used in explaining the surgical importance of the anatomy of the lateral pelvic wall to medical students. January 1951.